PAST & PRESENT

ILLUSTRATED

JULY 1993 No.62

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INFRARED SURVEILLANCE AND CONCEALMENT **GERMANY'S DUNKIRK, 1945** THE ROYAL GUARDS OF FRANCE, 1661-1763

CROATIA'S STRUGGLE AGAINST THE TURKS, 1400-1600 THE LONDON REGIMENT NEW SOUTH WALES LANCERS, 1885-1928

MILITARY ILLUSTRATED

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Our front cover illustration shows Brian Molloy's painting 'Water depicts a group of Confederate Soldie during the retreat through Virignia in 1863.

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THIRD REICH INSIGNIA

I have just received the April issue of 'Ml' and was very pleased to read the article by Gordon Williamson on the insignia of the Leibstandarte SS 'Adolf Hitler', being a collector of SS insignia myself. Mr Williamson is to be congratulated on an interesting and informative article.

Chris Oldfield

I have been a regular subscriber to the magazine since its first issue in June 1986. However... Ten of the past twelve issues have carried articles on subjects connected with Nazi Germany, mostly of the SS. I neither wish to read such articles nor, such is my distaste for the subject, do I wish to subscribe any longer.

Michael Jones

(What do other readers feel on this subject? Ed.)

MICHIGAN CAVALRY

Company 'A' of the 7th Michigan Volunteer Cavalry, a member unit of the Confederation of Independent American Civil War Societies, is seeking recruits. The Company was founded last year and is dedicated to recreating the life of the cavalryman of the 19th century. It is not necessary to own a horse or even to be able to ride;

LETTERS TO THE EDITOR

The Editor of Military Illustrated welcomes readers' letters, which should be addressed to: The Editor MI, 36 Gannet Lane, Wellingborough, Northants NN8 4NW.

horses are hired from specialist riding stables and riding instruction is provided for novices, up to and including manoeuvres from period drill manuals. Uniforms are made from authentic materials and to original patterns, but be warnedfull participation is not cheap! Anyone wishing to learn more should contact me at the following address.

David Webb, 3 Broad Mead, Trowbridge, Wilts BA14 9BX; tel (0225) 762375.

BRITISH ARMY MUSICIANS

I was interested to see in their article in your March issue that Philip Haythornthwaite and Gerry Embleton seem to lump drum and fife musicians in with band musicians. It seems inconceivable that such veteran military antiquarians as your authors do not know what a gulf yawns between these two groups, even to this day. Nonetheless, may I beg an inch or

two of your columns to explain that drummers (including fifers and flautists) are the Company signallers and Battalion timekeepers of yesterday and now also combat infantrymen, while the band musicians were are just that.

Colonel P.S. Walton, Chairman, The Corps of Drum Society

(Didn't bandsmen also act as stretcher bearers? Ed.)

SHARPE'S EAGLE

Am I alone amongst your readers in being very disappointed by this programme? Having read encouraging coverage in your April issue, I was looking forward to the series; but on the strength of my military experience and plain common sense, I was dismayed by what was shown.

There are many aspects on which I could comment, but I will select just one: the Colours. I do believe I saw the King's Colour of the 'South Essex Regiment' carried

upside down? The Colours were certainly hung in the wrong order in the officers' mess tent. Were the Colours really carried in the Peninsula, one by an officer and one by a private, without an escort? I doubt it. I also suggest they would have been carried cased at 'the slope', not "the carry'. And surely no officer would have got command under Wellington if he was stupid enough to send his Quarter Guard with one Colour to see off a French patrol.

Colonel Andrew Duncan

RICK SCOLLINS

Friends of the late Rick Scollins are planning a variety of events in memory of the man and his work. An initial step is to compile a catalogue of Rick's paintings and drawings. The organisers would be grateful if any individual or organisation which holds examples would contact me at the address below. All information will be treated in the strictest confidence. It is hoped to hold a major exhibition of Rick's work at a later date: 'MI' readers will be kept informed. If you can help, please do.

Rob Chapman, 10 Westbourne Road, Walsall, West Midlands WS4 2JA; tel (0922) 644078.

Video releases to buy Desert Victory (DD Distribution:E) The SAS (DD Distribution:E) The French Foreign Legion (DD Distribution:E)

DESERT VICTORY (1943) is the famous documentary film account of the decisive victory by General Bernard Montgomery's Eighth Army over Field Marshal Erwin Rommel's Afrika Korps at El Alamein in October/November 1942. The film was almost never made. David McDonald, the head of the Army Film and Photographic Unit (AFPU), went to North Afrika to lead an AFPU section, but had difficulty interesting Montgomery in the medium. However, a fortuitous meeting with commander-in-chief General Harold Alexander resulted in the suggestion that MacDonald should return to London to commence production. MacDonald discovered that Alex Bryce, in charge of production in his absence, had already started. Dissatisfied with what he saw, MacDonald appointed Roy Boulting as director. Prime Minister Winston Churchill rerecorded at Chequers his victory oration delivered at Tripoli, and a stirring score was composed by William Alwyn.

The narration, written by journalist James Lansdale Hodson, opens with a description of the Western Desert as a 'place fit only for war'. It describes how in a campaign which had cost 80,000 men, General Claude Auchinleck had fallen back 400 miles to a strong defensive line just 60 miles from Alexandria flanked by the Mediterranean and the Quattara Depression. The resulting battle would decide the

ON THE SCREEN

fate of Africa.

The British, along with their Allies the Australians, Indians and South Africans, survive attacks by the Luftwaffe. Churchill arrives with promises of reinforcements and new leadership in the form of Generals Alexander and Montgomery.

The main section of the film deals with the actual battle. Maps show the final dispositions of forces of both sides on the evening before the battle. This is followed by the famous sequence of a night artillery barrage, sappers clearing a way through minefields and an advance by Highlanders with fixed bayonets. The first objectives are taken, and diversionary attacks are made at the south of the line where Rommel is expecting the main attack. The next sequences deal with the fierce eleven-day battle that followed. Rommel counterattacks, but his lines are eventually broken through in the north. After twelve days and nights his forces are in full retreat.

The final section of the film deals with the pursuit leading to the recapture of Tobruk, Benghazi and Tripoli. Enormous numbers of prisoners are taken, and casualties are five-to-one in the Allies' favour. Alexander sends a victory telegram to Churchill who declares that 'the fame of the desert army has spread throughout the world'. The film ends with a victory parade and flypast attended by Churchill and Montgomery in Tripoli.

The film is justifiably considered one of the most important World

War II documentaries. However, several sequences, especially the night advance, are clearly faked. Camera positions, which suggest the cameraman is in the front of men charging at the enemy, betray several daylight shots. Boulting reversed some film so that the Axis forces move left to right and the Allies from right to left. Nonetheless, the film enjoyed great critical and commercial success both in Britain and America.

The SAS is the first title in a series with the generic title Elite Fighting Forces. The programme explains how Churchill first created the Commandos after Dunkirk. One of their first recruits was Lieutenant David Stirling of the Scots Guards who saw the need of an independent unit to operate behind enemy lines in North Africa. This resulted in the creation of 'L' Detachment, Special Air Services Brigade, which destroyed ammunition supplies and gathered intelligence. Further SAS units worked with partisans in Europe before D-Day, and with conventional force afterwards.

With typical military lack of fore-sight, it was disbanded in October 1945. However, Britain struggled to regain control of its empire in the immediate post-war years. Communist guerrillas necessitated the formation of the Malayan Scouts in 1950, which was renamed the 22 SAS Regiment a year later. This regiment was later deployed in Borneo in 1962 and Aden in 1964.

The assassination of Israeli athletes by Black September terrorists

at the 1972 Munich Olympics demonstrated the need for a counter-revolutionary wing within the SAS. The SAS has operated in Northern Ireland since 1976, usually in the form of reconnaissance patrols. The Iran embassy siege in 1980 gave world-wide media attention to an SAS operation, and made their motto 'Who Dares a household phrase. The importance of Special Forces, including the Marines and the Parachute Regiment, Falklands War and the deployment of the SAS in the Gulf War are described.

The programme includes original SAS colour film shot in Malaya and Borneo, and familiar news footage of the Iran embassy siege. There is film of their training headquarters in Hereford, with faces blanked out for security reasons, and retired SAS troopers add their comments.

The French Foreign Legion tells the story of the famous unit from their conception in 1831 by King Louis-Philippe to their involvement in the Gulf War. The significance of 30 April, Camerone Day, is explained, and Captain Danjou's wooden hand, the Legion's most precious relic. Mention is made of campaigns in Algeria, the Crimean War, Madagascar, Syria, and of course Indo-China. The last includes film of the siege of Dien Bien Phu in 1954 which resulted in the deaths of 8,000 légionnaires. There is film of the selection processes, intensive training and legion ceremonies at their headquarters in the south of France, and a mock air assault at their training camp in Senegal.

Stephen J. Greenhill

THE AUCTION SCENE

THE LAST FEW weeks have been very busy ones for the arms and armour trade with sales at all the main rooms and the London Arms Fair at the end of April. Judging by the general results it really does begin to look as if the recession, at least as far as the trade in arms and armour is concerned, is receding slowly but steadily. All the auctions did extremely well and business at the Arms Fair seemed fairly buoyant. Most dealers were prepared to admit that it was not a bad fair - this usually means that most if them did well but don't like to tempt fate by admitting it! There was also a fair in Birmingham which also attracted big crowds.

Christies started the 'boom' with their sale on 31 March when they sold the Eugen Nielsen Collection from Norway; over 300 lots of varied arms and armour including Japanese swords. The quality of items ranged from first class to average and, as might be expected, the top quality pieces sold at prices usually well above the top estimates. An early 17th century sword stick with its scabbard decorated with horn and mother-of-pearl plaques went at twice the low

Lot 177. The full dress uniform of an officer of the Shropshire Yeomanry Cavalry of the late 19th Century which sold for £1,210. The helmet with its correct plume was complete with its travelling time bearing the officer's name - a detail which always helps enhance the value of such items.

estimate, selling at £7,475. A very impressive Maximilian armour in the style of the 16th century, which means in auctioneer's language that it was a copy, sold for £13,225, and an unusual burgonet of about 1630 realised £7,475 as against an estimate of £3,500-£4,500. The sale was not only a very good one, but was also remarkable in that every single lot was sold - an unusual and rare event for very few sales achieve such a good result.

April opened with the first of the Sotheby sales of arms and armour under new arrangements to be held at Billingshurst in Sussex. The attendance in the morning for the medals was good and there was brisk bidding for the various lots with keen interest in the Imperial and Third Reich badges and medals. Many of these lots came from one collection which had not previously been seen by the trade and such new material always rouses interest and attracts bids. In the afternoon was the sale of 156 lots of arms, armour and militaria, Most lots sold at prices that were about normal for the market although there were one or two surprises - an SS dagger in very good condition realised £1,450 and an early 18th century Scottish basket-hilted sword rose steadily to £2,700, many times the estimate. Another surprise was a French Mounted Grenadier's sword which realised £1,700 - over six times the top estimate. In the militaria section British Army cap badges sold very well and there is obviously a keen



interest in this side of the market. A delightful pair of pocket percussion pistols with silver decorated butts were very quickly pushed up to £2,300.

The second part of this sale covering modern sporting guns and the collection of vintage and antique weapons took place in London on 15 April. Prices were good and it is seems clear that game shooting is still patronised by some very wealthy people for the prices paid for sporting guns soon reached many thousands of pounds for quality guns. The Atkin, Grant, Lang and Lancaster Collection included several very fine antique weapons, one of which was a double barrelled flintlock gun by Ezekiel Baker made for the Prince Regent - it sold for £14,000, well above the estimate but still thought to have been a

Philips had a bumper sale on 7 April and not least among the prices was £20,000 paid for a German Enigma encoding machine which had been shown in the catalogue with an estimate of £500-£700 - a misprint with a missing zero. Some Persian armour, helmet, shield and arm guard did very well and sold at £1,500. Military uniforms seem to be holding their value and a Napoleonic infantry coat and two sets of overalls realised £389, an officer's tunic of the Shropshire Militia made £220 and the tunic of the St. George's Manchester Volunteers of the early 19th century sold at £400. Headdress, as always, maintained its high prices with Blue Cloth helmets realising £360 for a Victorian Volunteer Artillery, and a Victorian Officer's of the 49th Regiment made £500.

This London Arms Fair was a little special for it was the 50th, making it the longest running event in this field. The fairs began in 1968 at the Horticultural Hall in Westminster, very much as a trial but which established the fact that there was a market for such an event. Since then it has established itself as a

Lot 220. The busby, full dress sabretache, back pouch and belt of a Victorian officer of the Royal Artillery and dating from about 1872. This lot realised £1,045, a good price for some items in very good condition. All items from the sale of militaria held at Christies, South Kensington on 19 March 1993 and photographs courtesy of Christies.

landmark and has generated a large number of similar events all over the country. There were strong contingents of Italian and German dealers there, no doubt benefiting from the rate of exchange. Friday was busy but Saturday was a little quieter than usual as attendance was probably affected by the IRA bombs in London. Most dealers seemed reasonably happy and reported generally satisfactory sales.

Bonhams had a small sale of arms and armour on 21 April which included an Italian sallet ascribed to the 15th century which made £3,600. As with the Sotherby's sale cap badges sold well. A five-shot revolving 11 bore shotgun by Colt sold for £1,400 and a small collection of Colt percussion revolvers did very well. Bonhams have a system of allocating a certain number of lot numbers to entries received up to a week before the sale. It is a good idea for the vendors but it does mean that unless one can view the sale there is no way of knowing what is on offer.

The month closed with Wallis and Wallis Special sale but at the time of writing full results are not to hand. The revolver, a Smith and Wesson, used to murder Jesse James, was sold for £105,000 and it was purchased by an American so that it will be going home. There was some doubt over the ownership of this weapon and at one time it looked as if it might not be sold. The problems were overcome just in time for the sale

Frederick Wilkinson



Infrared Surveillance and Concealment

PIET BESS

THE INTERTWINING histories of infrared camouflage detection and infrared-tuned camouflage colouration begin in World War II, but it was not until the early 1960s that small, practical devices reached the production stage, making 'invisible' infrared battlefield surveillance in real-time practical on the battlefield, at least by the armies of the richest nations.

THE DEVELOPMENT of warfare has come over the years to include the need to conceal one's forces from enemy detection. Visual concealment for individual soldiers involved, during the last centurv. uniforms coloured to match a given battlefield environment and, since about WWII, disruptive pattern-printed or 'camouflaged' clothing. As conceal-ment has been improved, so has the ability to see through camouflage, including technology which sees in different parts of the spectrum than the

What IR camo looks like done right: black and white IR photo of 1988 American Woodland pattern, suitably pale against the background. human eye. While far-infrared heat-sensing and radar have also become viable on the battlefield, the present topic of discussion, night vision in the near-infrared, has begun to have an impact on the face of war since late WWII.

Infrared light is greatly misunderstood. Most people, if asked, will say that infrared is heat. This misconception can be found even among those involved in IR detection, including the authors of one American industrial camouflage manual of WWII¹, which defined infrared in print as 'heat radiation'. Heat, in fact, is just that, heat, or, to be more informative, a rise in temperature.

To the credit of those who closely associate heat and

infrared, IR is linked in two important ways to high temperature; on the one hand, incident IR light produces a faster increase in temperature than. for instance, red light, just as red is 'hotter' than green or blue light. On the other hand, as a hot stovetop glows quite strongly red, so people and working machines glow weakly in the infrared spectrum. This is the basis of thermography, or heatsensing. Thermography has great potential in military application, as it can see through light cover and most haze, but it takes place in an entirely different part of the IR spectrum than near-infrared night vision viewers. Near-IR viewers can be dealt with by what is commonly known as 'camouflage', eg, colouration and disruptive-pat-

The electromagnetic spectrum, the scale which includes visible light, also covers several invisible phenomena like gamma rays, X-rays and radio waves. Closer to the visible sliver of the spectrum, there are also several colours outside our vision, in the ultraviolet spectrum, and in the huge

band between the edge of our perception of red, ~740 nanometers (nm), and the beginning of the radio band, at 1mm. This huge general region of wavelengths is called the infrared spectrum.

While thermography detects extremely small differences in the amount of radiation in the 8,000 to 13,000nm range of the far infrared band², other night viewers use light in the near infrared band: nearer, that is, to visible light. In addition to some of the visible band, these can detect infrared light to as much as 1,200nm in some cases: most modern scopes can see out to 900nm or so.

At the outbreak of WWII, infrared photography was realised as a powerful tool for camouflage detection, due to what are known as 'infrared effects'. These are haze penetration, the discrepancies between the visible and IR reflectances of many objects, and the very high infrared reflectance of healthy vegeta-

Black and white IR photo of 1969 ERDL pattern showing IR dark.







Late-War Dense tigerstripe pattern shirt, centre, showing some IR in the black stripes in contrast to IR dark colours of other pattern pictures. The size marking 'L' seen here is not visible to the naked eye. Photo does not include green/tinted 'yellow'.

preters for the most part lacked experience in interpreting it.

The war also spurred the development of an even more effective photographic tool, colour infrared film which broke down its spectral sensitivity into representative 'false' colours. This came out in late 1942, and was recommended for procurement by the US Navy in early 1945'. Too late for the war, this became Kodak Ektachrome Infrared Aero Film, Camouflage Detection Film to the military. It has found a wide variety of uses in peacetime, including agriculture, archae-

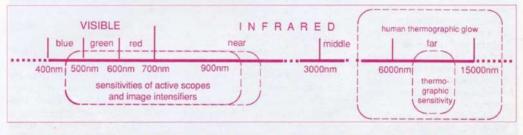
ology, and the illustrations accompanying this article.

Photography such as this lent itself well to reconnaissance for strategic bombing, where all intelligence came with a rather ponderous turnaround time. For ground combat, however, the situation needed to be assessed immediately, in real-time. During World War II, work was accelerated on image tubes, first discussed in print in 1934-368. These infrared viewers, part of the development of television, were seen to have military applications early on, sensitive as they were to light beyond the visual spectrum. Britain, Japan9, Germany10 and the United States are known to have produced some types of infrared detectors during the war. The latter two states went so far as to attach IR viewers to small-arms as night-time telescopic sights11.



tion4. Kodak made infraredsensitive black-and-white film commercially available in 1937, after a decade of intense experimentation^s. This represented high IR reflectance up to 900nm as light areas in a picture. Greenery showed up on such film as very light indeed; otherwise, on ordinary film, plants show up as dark, but they show a notable 'spike' in the area between 750 and 1,000nm. This was not the case for standard green camouflage paint. Military planners everywhere realised in their studies of aerial reconnaissance that new paints would have to be used on the targets of such photography. Their effort to disseminate this information is still in evidence on the shelves American architectural libraries. It is worthwhile to note that while combatant states scrambled to protect their means of production from infrared detection, the Anglo-American militaries failed to fully exploit IR photography in WWII. Although the Allies had Kodak Hypersensitive Infrared Aero Film, their photo-inter-

Late-War Dense Tigerstripe pattern shirt worn in the bush (with jeans). Photo does not include green/tinted 'yellow'.





About the Illustrations

The photographs accompanying this article were shot using Kodak Colour Infrared Ektachrome film, a relatively consumer-friendly development of the Camouflage Detection Film mentioned in the text. This is a false-colour film, that is the colours of the photograph represent some of those of the real world, but show them as different colours.

Like all colour photos, they are composed of three colours. namely, blue, green and red. For the sake of clarity, I shall refer to the false colours in the IR photos in quotes, to set them apart from those of the real world. These colours sensitivities can be thought of as being shifted to the right along the spectrum: thus, 'blue' indicates green, 'green' shows red, and 'red' signifies light in the nearinfrared, while real-world blue is not present in the photographs.

The central concept in concealment in the near-infrared is the high IR reflectance — 'redness' — of vegetation. The ideal for green-dominant camouflage suits is therefore to look 'red', while other patterns, such as desert and urban camos, should be 'blue'.

Because the film is not intended for consumer aesthetic tastes, the actual shades of the pigments in a given batch often are not identical to those of another batch. That, along with the film's sensitivity to heat and age, and the wide variation in the IR content of sunlight, gives photo-series very different colour-balances from one another.

While these pictures do show the IR suitability of these suits, and while such film is a powerful tool for photographic reconnaissance, it should be kept in mind that this is not how the world looks through a (present-day) Starlight Scope, or active IR viewer, both of which give monochrome images, similar to the black-and-white IR photos also accompanying this article.

The author wishes to thank Tony Moffitt for his photographic assistance.

A German project to equip the MP 43/44 assault rifle with an IR sight began in mid-war and culminated in successful tests just a couple of months before war's end. This was envisioned as a defensive weapon system for repelling sappers from armoured vehicles in darkness. The American effort resulted in a scope based on an RCA image tube being mounted on the M1 Carbine in early 1944, which was successfully employed to defend against nocturnal Japanese infiltrators on Okinawa. While very early American tests showed a range of about 35m. German trials concluded that 70m was the limit of effectiveness against individual human targets. The reason for the shortcoming in effective range was the dependance of the viewer on an infrared searchlight12.

Using their own light source, these scopes fall into the category of so-called active viewers. Actually, they are not in themselves active in mode of detection: they give an unamplified picture, which, at night, can be understandably dark. This gives rise to the need for a light source, which actively illuminates the scene. This light is filtered, so that nearly all visible light is blocked, and only IR shines through, keeping the user's position concealed to those not similarly equipped. According to the US Army, an active IR scope's faint red glow was invisible to the naked eye beyond 15m13. Of course, these scopes become fatally obsolete as soon as an enemy obtains an IR scope and pinpoints his opponent's searchlight. Worse, while the scopes were expensive and fragile, the Germans produced about 10,000 directional IR detectors during WWII, to the Americans' 2-3,000 scopes. These fluoresced red when exposed to IR, and consisted mainly of a paper tube¹⁴!

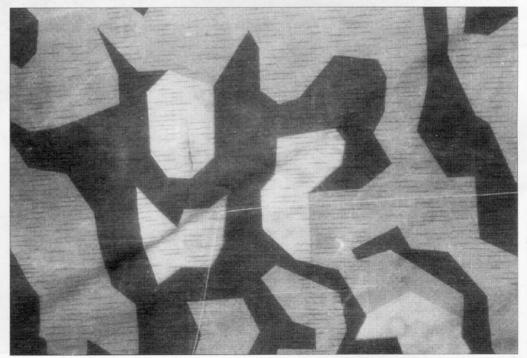
Germany was far ahead of the game with their IR detectors while not even the Americans are known to have deployed IR gunsights in the European theatre. They also led the way in IR-tuned camouflaged uniforms. Camouflage cloth dyes and pigments, like paints for concealing factories, tend to be dark in IR as well as in the visible spectrum. Colours which reflect a lot of light across the entire visible spectrum tend to reflect well in IR. Khaki (beige) dyes are a case in point. Colours with high reflectance in the adjacent portion of the visible reds and browns tend also to reflect well in the near infrared. The latter may explain the change in colouration of the Splinter pattern in mid-war: the socalled (Tan-and)Water pattern, a version of the Splinter pattern with reddish-brown replacing green, may be an attempt at IR brightening through use of red dyes. Other than these two types of colouration, of limited use for green-based camo patterns, practically all colours used in camouflage pattern printing were IR dark.

IG Farben, the German chemical conglomerate, tested its entire line of fabric dyes by black-and-white infrared photography to find a green dye with high IR reflectance¹⁵. These tests resulted in some late-war Splinter-pattern gar-

ments being printed with IR bright Idanthren-brand 'Olive GW' in the green parts of the pattern. This turns out to have had no practical effect in action, but safe, the Germans seem to have thought, is safe. The Splinter pattern was reproduced with high-IR green dyes upon the German Army's reconstitution in 1956, and worn briefly until the Bundeswehr switched to one-colour battledress¹⁶.

During the Korean War the M 1/IR scope combination, called the T-3, saw some action. Similar weapons were apparently not used by the opposite side, though the Soviet Union had them in service then. In Korea the shortcomings of the IR-equipped M1 - fragility, bulk and weight - caused more complaints than on Okinawa. It was no longer the wonder weapon it had been against the Japanese' terrifying tactics of infiltration. The obsolescence of this weapon, a production prototype, contrasted sharply with better IR viewers in development at the time. Through the mid-1950s efforts were under way to make night sights smaller and more rugged. Batteries, located in a small rucksack on WWII models, were miniaturised to the point that they could be mounted on the rifle¹⁷. Also, work continued on passive night vision.

During the Vietnam War, the IR scope/Carbine combination was taken out of mothballs as part of American aid to the Army of the Republic of Vietnam. This, ironically, also made it part of the logistical system of the opposing



German Splinter-pattern, here printed on a postwar Zeltbahn. IR bright medium green areas of the print show as the lightest shade in the photo. Black-and-white IR photography of just this sort was used by IG Farben to find an IR suitable green dye.

Black and white infrared photo of 1980s Portuguese lizard-pattern uniform showing dark against characteristically light foliage. This film sees IR and some visible light in monochrome gradations-shades of grey-in the same way that night vision scopes do.

National Liberation Front, or Viet Cong¹⁸. As the war continued, the equipment of the insurgents also included more modern Soviet Block matérièl. Through 1975, the Soviets retained active searchlight-and-scope IR viewers in their inventory¹⁹, and this is presumably the type of foreign-aid IR device which would have found its way into the hands of the Americans' enemies there.

Two decades after the Germans printed IR treated camouflaged uniforms, the US Army followed suit. The green side of their reversible helmet camouflage cover, an oak-leaf motif pattern that was also used on shelter-halves and custommade uniforms, shows notable IR reflectance in the green leafshapes printed on it. Oakleaf pattern helmet covers began to appear in 1965, two years before the Army adopted the more renowned ERDL pattern. American prints of this later ubiquitous pattern, also known as 'jungle' or 'leaf' pattern, are reported to have been IR brightened20. Photographic investigation has not borne this out, which may indicate that only some uniforms were so treated, or that the IR dyes used suffered inordinately from fading. Other aspects of American vat-dye manufacturing of the time left something to be desired, as can be seen from the hazy borders and fast-fading visible colours of the vat-dyed ERDL pattern.

First developed in 1948 at US Army Engineer Research and Development Laboratory (ERDL), the pattern was originally used by ARVN airborne units in 1965, replacing their earlier identifying camouflage pattern based on the WWII British paras' pattern (see MI/11). The ARVN paras' version of this print were screen printed in-country using pigments, rather than more expensive vat-dyes, and were in all likelihood not IR-treated. Two years after this, US-made ERDL camouflaged uniforms began to be issued to American specialist troops.

During the final stages of the war, the Americans made other moves toward IR-suitable uniforms. A few one-colour uniforms issued very late in the



war were dyed with IRenhanced colours²¹. Also, some Vietnamese Tigerstripe pattern uniforms were printed with high-infrared black dyes.

Colour infrared photography of Tigerstripes shows that they are for the most part IR dark. This is to be expected for a Third World military in the 1960s. I have, however, found some Tigerstripe uniforms which show IR brightening in the black stripes. 'Advisor's Dense' pat-tern, as catalogued in Tiger Patterns by Richard D. Johnson²², has been found to show this high-IR black: 'Late-War Dense' pattern, a highertech vat-dyed print in contrast to earlier pigment-printed Tigerstripes, also sometimes shows some IR brightening. The Advisor's pattern was worn at least as early as 1967, the Late-War after 1969 at earliest²³.

It is possible that this is a fluke of unstandardised production. However, the IR enhancement of these patterns, along with the vat-dyeing of the latter, suggests American involvement in production. Perhaps manufacture took place in a more developed third country such as Japan?

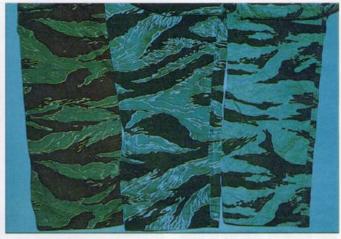
Other camouflage patterns, worldwide, showed no attention to the infrared until late in the 1970s.

As the war continued, American IR viewers continued to improve. Passive night vision, in the form of intensification of the electronic image, didn't go shining some spotlight about. This was what military IR research had been after

all along. One very early patent of an image intensifier was taken out in France in 1936²⁴. There had been research on them in Great Britain, and actual fabrication of prototype models at least in the United States and Germany during the war. One model was purchased in 1952 by the US Bureau of Ships²⁵, but it took significantly longer to get the devices into the hands of ordinary soldiers.

The need for night movement in American counter-insurgency in South-East Asia created a demand for ever better night vision devices. It was here that the 'Starlight Scope' intensifier came into its own, stripping the security of the cover of darkness which had up to that point been one of the chief strengths of the





Left: 1969 ERDL-pattern uniform,

1969 ERDL-pattern unitorm, badged up for Vietnam War-era duty. Though the pattern is alleged to have been IR brightened during that conflict, photographs of period uniforms in this pattern do not bear this out.

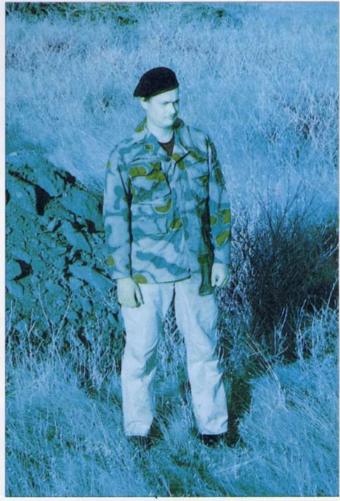
Below left:

1978 ERDL-pattern shirt (with 1988 Woodland pattern trousers). By this point, three years after American involvement in Indochina, ERDL pattern had been IR brightened.

Three Tigerstripe patterns; Advisor's Dense pattern (left) shows marked IR brightening in black stripes, in contrast to John Wayne Dense pattern (centre) and an IR dark example of Late War Dense pattern (right). Pattern names after R.D. Johnson.

Below:
1968 West German border guards Water pattern jacket. This is a carry-over of the WWII pattern, a colour variation of Splinter pattern. the inherent IR brightness of its sed brown sorts also food. its red-brown spots, also 'red-brown' in this CIR photo, may be the reason for this choice of colour.





NVA and NLF forces. These took the form of weapons sights or hand-held viewers, useful for observation or sniping, though still somewhat cumbersome, weighing nigh on 6lb for their 18in length²⁶. The Starlight Scope reached production in 1964²⁷, very much in time for the American involvement in Indochina.

These were somewhat rudimentary devices, consisting of a series of three image tubes of basically the same type used in active viewers28, but they overcame several limitations of the active Unamplified scopes had reached viable production themselves only three years before, and been successfully tested by Special Forces advisors in Vietnam with mixed results29. Aside from the unnerving fact of their detectability, their spotlights had difficulty seeing past the glare of vegetation, because plants reflect so much near-IR. Early passive scopes, not needing to illuminate the target, overcame this. Also, the type of active scope employed in Vietnam hazed over in low light or twilight conditions, possibly due to extended spectral sensitivity (out to 1200nm)30. The new Starlight Scope, on the other hand, excelled in twilight conditions, needing, in any case, some amount of ambient light to function at all. In fact, one of the ways it was employed was in a semi-active role. Here, a powerful IR spotlight, mounted on a vehicle, was used to illuminate the scene for a sniper with a Starlight Scope firing from another location31. Eye fatigue continued to be a problem, with periods of rest prescribed every quarter of an hour or so.

Infrared scopes, in their infancy in the late days of World War II, had come to make a significant impact on how war was waged by the end of American involvement in Indochina. Infrared-tuned personal camouflage, pioneered somewhat prematurely by the Third Reich, also came to be a commonplace part of the American military institution by the fall of Saigon, while other armies ignored this aspect of camouflage.

Acknowledgement

The author wishes to acknowledge his great indebtedness to Kaplan's Surplus of San Francisco for access to the camouflage suits seen here.

Notes

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9. The Complete Book of US Snipers, Peter R. Senich, Paladin Press, Boulder CO, 1988.

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16. Uniforms of the Infantry, Jörg M. Hormann, Schiffer Publishing, West Chester PA, 1989.

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19. Brassey's Infantry Weapons of the World, Maj. Gen. J.I.H. Owen It RM, ed, Bonanza Books, NY, 1975. 20. US Army Uniforms of the Vietnam War, Shelby Stanton, Stackpole Books, Harrisburg PA, 1989.

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30. 'Image Intensifiers and the

Scotoscope', G.A. Morton. 31. The Complete Book of US Snipers, Peter R. Senich.

COLONIAL WARFARE

The New South Wales Lancers, 1885-1928

ROBERT WELLINGTON

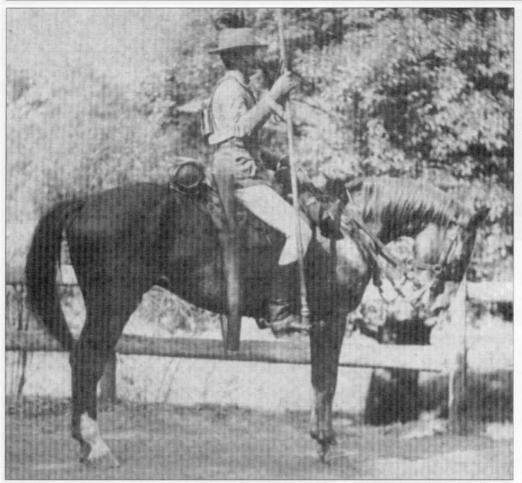
DISTINGUISHING THEMSELVES in action during the Boer War and earning several battle honours during World War I, the New South Wales Lancers were an élite body of men who prided themselves on their training and discipline as much as on their uniforms.

TWO FACTORS inhibited the development of a high standard. of military training in New South Wales — its isolation from other countries of the Empire, and the lack of experienced instructors. In 1897 there had been strong moves to give selected members of the regiment experience of active service overseas. It was suggested that members be attached to British cavalry regiments in India. The experience thus gained could then be passed on to the regiment. This proposition was readily accepted in principle by the British government, but quashed by the then Premier of New South Wales, Mr George Reid, a man of very limited military experience or knowledge who, in his reply, stated that he 'did not wish to see a spirit of unrest and military adventure grow up in this

country'. To remedy this deficiency Lieutenant-Colonel James Burns, the Commanding Officer of the Regiment, arranged for a squadron of 106 all ranks to proceed to England, in 1899, for six months' training with the regular cavalry. This was carried out in the face of bitter opposition from the New South Wales Government and was only realised through pressure from the Imperial

Corporal Rowland Edward Harkus wearing the Field Service Jacket which was introduced in 1894. The jacket is of brown tweed with red piping. The Carrington crest is quite visible on the collar and the regimental badge on the upturned side of the slouch hat. Harkus died of enteric fever at Bloemfontein on 4 April 1900.





Government and the personal efforts of Lord Carrington who gave both political and financial assistance.

The 'Aldershot Squadron', as it was to become commonly known, was commanded by Captain C.F. Cox of the Parramatta Half-Squadron. He was later to become a Major-General and Honorary Colonel of his old Regiment. The squadron embarked for England on 3 March 1899, the anniversary of the Regiment's forming, and arrived in London in April. They were met at the docks by the band of the Guards Coldstream who marched them through the streets to Waterloo Station for entrainment to Aldershot. At Aldershot they were attached as the fourth squadron of the Dragoon Guards (Carabiniers). Their mounts were supplied by the 15th Hussars who were embarking at that time for service in India. During their stay they were barracked with the 2nd Devons and then the 5th Northumberland Fusiliers (the Fighting Fifth) who had just arrived back from Egypt and Crete.

For the first few weeks riding school was the chief feature of the training schedule. This enabled the Australians to get used to the different riding styles of the Irish-bred horses.

As part of Brigadier-General French's Brigade (6th Dragoon Guards, 12th Lancers and 13th Hussars) the detachment soon settled down to some strenuous training. They continually practiced sword and lance exercises and partook of a short course in musketry. The lack of adequate musketry practice for the cavalry units at this time became apparent later on that year and early in 1900 in South Africa.

In July 1899 the New South Wales Lancers Squadron was attached as part of the 7th Dragoon Guards (the Black Horse) for a period of several weeks. In August the squadron took part in the annual Salisbury Plains manoeuvres, the week on the grassy chalk plains an ideal end to their intensive lead-up training.

Their anticipation of their return to Australia was marred by the build up of antagonism between the British and the Boers in South Africa. Captain Cox, the contingent commander, became active in seeking acceptance for the lancers to participate if any action ensued. No official word had come through though by the time the 'Aldershot' detach-ment (minus five members who had handed in Regimental property and pursued their own interests in England) departed on 10 October.

Trooper Lanning of Parramatta Troop of the NSW Cavalry Regiment, circa 1892. He wears the Service Dress issued from 1889 to 1894, in brown tweed with red shoulder straps. The shoulder straps bore the letter of the troop in this case 'P'.

While the purpose of the visit to England was to provide experience and training in cavalry skills and to provide future qualified instructors, it fortuitously provided a readily available colonial unit to assist the British cause at the outbreak of the Boer War. The squadron had sailed from England one day prior to England's declaration of war upon the Dutch Boers who had invaded the British territories of Cape Colony and Natal on 9 October 1899. These were pre-radio days and nothing was known of any further developments in South Africa until the squadron's arrival at Cape Town on 2 November.

The willingness of the New South Wales Government to offer assistance now that war had been declared was in marked contrast to its reluctance to provide encouragement and assistance to develop well trained units during the previous two decades. On arrival at Cape Town Captain

Cox received orders from the New South Wales Government authorising the Squadron to land for active service. One of the official cables, from the Premier, Sir William Lyne, forbade Captain Cox to land any member of the contingent under twenty years of age and ordered him to return them to New South Wales soonest. This caused most of the dozen or so troops under that age to disappear, some not to be seen again, officially, until after the ship had well and truly left. Altogether 29 of the contingent returned to New South Wales due to various commitments while 72 disembarked for active service. Thus the New South Wales Lancers became the first overseas volunteers to land in Africa after the outbreak of the war.

The horsing and equipping of the squadron soon commenced, but at first there was a shortage of arms and equipment. Hurriedly a troop of 28 lancers, under Lieutenant S.F. Osborne, was given what equipment was available and sent to join a force, under Lord Methuen, which was trying to relieve Kimberley from a Boer siege. As this force was short of cavalry (of the 10,000 soldiers only 900 were mounted) the Lancers got their full share of action and, by their conduct, became known as 'The Fighting Twenty-Nine'. During this period they were attached as part of the 9th Lancers. General Lord Methuen, greatly pleased by their work, repeatedly complimented them in person on their steadiness under fire. By the time the 'Fighting Twenty-Nine' rejoined the main body of the Lancers Squadron, on Boxing Day, they were experienced battle veterans.

Of the original 29, eleven survived sickness-and wounds to continue to the end of the squadron's term of service: nine of these holding the distinction of bearing eight, the maximum number, battle clasps or bars on the Queen's Medal. One of those who received the eight clasps or bars (Belmont, Madder River, Relief of Kimberley, Paardeburg, Driefontein, Johannesburg, Diamond Hills and Belfast) was Trooper McManis, then only eighteen years of age.

Meanwhile, reinforcements of men and horses were being organised by the Regimental Staff in Sydney and eighteen days after the Boer's invasion of Cape Colony, on 28 October, a draft, comprising Major G.L. Lee and 36 other ranks with 131 horses, Australian

'Walers', were on their way to South Africa. Two later drafts followed. In total, 171 members of the regiment served with the squadron in South Africa, while a further 160 served with other units.

The New South Wales Lancers Squadron became part of General French's Cavalry Division which was formed in lanuary 1900, and were employed on patrol duty in the Colesberg district. In February the squadron proceeded to Belmont, where they were attached to the Scots Greys, forming part of the 1st Cavalry Brigade. The following days saw them in action at the Relief of Kimberley (15 February), Dronfield (16 February) and at the operations which led to the surrender of General Cronje at Paardeburg. They took part in the battle of Poplar Grove (7 March) where they assisted in turning the enemy's left flank. They were also present at the battle for Driefontein (10 March) and at the occupation of Bloemfontein (12 March).

The squadron was then attached to the Inniskilling Dragoons, under the command of Major Allenby, and took part in the advance on Pretoria. Kroonstadt was occupied on 12 May and the Vaal River crossed on 24 May. They took part in the heavy fighting at Klip River on 28 May, where Major Lee, the Lancer Squadron commander, was complimented by General French on the excellent work of the squadron while with the advance guard.

The Lancers were highly regarded owing to the men's adaptability to the Boer style of fighting, their bushmanship, dash and other qualities. Because of the similarity to their homeland, the Australian soldiers found it easier to adapt to African conditions than did their British comrades. From start to finish they worked hard. The fact that the squadron's battle casualties were low by comparison with other units, even though it underwent no less frequent exposure to the Boer riflemen, is indicative of the good leadership within the squadron, good fieldcraft, and perhaps an element of good luck. They performed all the normal work of cavalry and were used particularly in reconnaissance and advanced and flank guards.

One outstanding performance is worthy of mention. On 3 June 1900 the division, with the Lancers at the head of the main body, was pursuing a Boer force and was itself ambushed near Valkheuval

Poort, Quickly dispersing along both sides of the road, the Lancers, along with a squadron of Inniskillings, hung on tenaciously for several hours while the remainder of the division was extricated. The action was continued far into the night with both sides unwilling to quit. Before morning though the Boers had retired leaving some wagons and supplies behind. For the quick action of rallying the Inniskillings and Lancers, Major Allenby was credited, by at least some British officers, with having

The King's Colour Party, 1904. Left to right: RSM G.E. Morris, DCM, Brevet Lieutenant-Colonel C.F. Cox and Squadron Sergeant Major J.E. Dooley. All three men served during the Boer War.

saved the day. The Australians were once again thanked by General French for their gallant conduct

The squadron was then present at the release of prisoners at Waterval on 6 June. On 9 July they helped reinforce General Hutton at Oliphantsfontein and were engaged with the enemy for several days thereafter. Prior to the end of their service in South Africa they also took part in various engagements in the eastern Transvaal, including LangKloof and Swartz Kop as well as operations in the Carolina and Barberton districts.

The squadron's term of serviced ended on 26 October 1900 when it was withdrawn from operations and returned to Cape Town where it embarked for Australia in November and

December. Of the 331 lancers who served with the Lancer Squadron or various other mounted units during the war in South Africa, three served through the entire war, three others re-enlisted and returned three times each and 44 of the lancers completed two terms of service. In all Australia supplied 16,175 combatants to the theatre and 16,314 horses.

In 1904 a King's Banner was presented to the regiment for its services in the war. This banner was laid up in St John's Church, Parramatta, in 1924. In 1908, His Majesty, King Edward VII, awarded the honorary distinction 'South Africa' which is emblazoned on the original guidon, now laid up in St John's Church, and on the present guidon carried by the regiment.

Following Federation





Training staff of the New South Wales Cavalry Regiment in Service Dress. The officer seated in the centre is wearing Drill Order or undress uniform. Photo dated circa 1892.

1901, responsibility for defence passed from the states to the Commonwealth. This resulted in a reorganisation of the forces in 1903. In New South Wales, the three regiments of the Mounted Brigade, Lancers, Mounted Rifles and Australian Horse, were expanded into six. In the process the regiment became the 1st Australian Light Horse Regiment (New South Wales Lancers). Its squadrons in the Hunter and Northern Rivers regions were re-formed into new regiments. Thus, by 1904, there were six light horse regiments in New South Wales forming two light horse brigades.

All mounted units were armed and trained as light horse as distinct from cavalry. Light horsemen were horsemen trained to fight on foot. They were required to fight on foot offensively and defensively, to perform reconnaissance and screening duties and to afford protection for all bodies of troops, both halted and on the march. This was distinct from the Mounted Infantry who were simply infantry soldiers temporarily provided increased powers of locomotion who performed purely infantry service. Weapons were the Lee Enfield Magazine Rifle

and bayonet. Lances and swords, the basic weapons of the cavalry, were relegated to ceremonial functions and tournaments. Regimental uniforms were slowly phased out and replaced by the Commonwealth service dress though the 1st Light Horse had sufficient stock of Lancer full dress uniforms to continue using them for ceremonial occasions until the outbreak of World War I.

The ranks of the light horse now contained a sprinkling of veterans of the Boer War, not to mention some who, as Lancers, had also experience gained at Aldershot in 1899. At this period enlistment in militia units was on a voluntary basis. Interest and enthusiasm continued in the light horse but a slackening of interest in other corps at a time when international relations were deteriorating resulted in the voluntary system being replaced by universal compulsory training from 1912. This remained in force until 1929. Compulsory training was not a new idea as it had been considered as early as 1901, and was incorporated in the Defence Act of 1903. Universal training did not affect the light horse greatly. There was only a minor reorganisa-

Drum horse and drummer, NSW Lancers' Band, 1906. The scarlet drum banners were edged with silver and had the regimental badge heavily embroidered in silver on them. tion of regiments in New South Wales and the raising of a new one, the Illawarra Light Horse. However, there was a renumbering of regiments. This reorganisation resulted from the recommendations made by Lord Kitchener after his examination of the army in 1909-10. Under this reorganisation the New South Wales Lancers became the 7th Light Horse. It remained so until 1918. The light horse, in effect, remained a voluntary corps as only men willing and able to provide a suitable horse were acceptable.

With the outbreak of the First World War in 1914, Australia promptly made military forces available to help Great Britain: However, as the Commonwealth Military Forces were limited to service within Australia and its territories, it was necessary to form an expeditionary force — the Australian Imperial Force (AIF). While the history of the 1st Light Horse Regiment (AIF) is not part of the history of the

New South Wales Lancers, many members of the Lancers joined the AIF. Also, at the end of the war, the New South Wales Lancers inherited the battle honours of the 1st Light Horse Regiment (AIF) and later the designation 1st.

However, the members of the New South Wales Lancers were liable for employment on active service in Australia and instructors were provided by the Regiment to assist in the Light Horse training camps of the AIF. The unit also had its share of guard duties on vital public utilities such as water pipelines, dams and bridges. In addition, squadrons of the Regiment, during 1915, were involved in the patrolling of the coastline around the Sydney area.

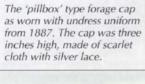
Following the Great War the Australian Imperial Force was disbanded and the reorganisation of the militia began. New South Wales had provided four regiments of Light Horse for the AIF, the 1st, 6th, 7th and 12th Light Horse Regiments. In order to perpetuate the traditions and distinctions gained by these regiments, the designations of militia regiments were changed to conform with the numbers borne by AIF units. The 7th Light Horse (New South Wales Lancers) was therefore redesignated the 1st Light Horse Regiment (New South Wales Lancers). Henceforth, until 1942, the regiment wore the distinguishing colour patch, light blue over white divided diagonally, the colours of the 1st Light Horse Regiment of the Australian Imperial Force.

In 1924, units were authorised to prepare claims for battle honours for the Great War, and in 1926 approval for light horse regiments to possess and carry guidons was gazetted. Thus, on the guidon presented in 1928 were emblazoned the following battle honours: 'Defence of Anzac, Sari Bair, Rumani, Magdhaba-Rafa, Gaza-Beersheba, Jerusalem, Jaffa, Jericho, Jordan (Amman), Megiddo'.





Officer pattern Patrol Jacket, 1885. This was worn as an undress uniform with Bedford cord breeches and a blue forage cap with red band.







The drab felt slouch hat which was later to identify all Australian soldiers, as worn by the New South Wales Cavalry Regiment from 1890 through to approximately 1906. The puggaree was of scarlet twill and the plumes of black cock's feathers.

The khaki felt slouch hat as worn by Light Horsemen during World War I. The emu plumes — worn by all units — were originally only worn by the Queensland Mounted Infantry. They were sometimes referred to as 'kangaroo feathers'! The puggaree was of khaki material with seven

folds, representing the seven states and territories of the Australian Commonwealth. The badge on the upturned side is the Australian Commonwealth Military Forces' pattern or 'Rising Sun', as it is more commonly known.





'Warrior' series 1: The Norman Knight by Christopher Gravett, colour plates by Christa Hook. 2: Waffen-SS Soldier by Bruce Quarrie, colour plates by Jeffrey Burn. Osprey; ISBNs 1-85532-&-288-9; each 64pp inc 12pp colour plates, approx 50 mono illusts; bibliography; £7.99 each.

These are the first two titles in a new and ambitious series which is giving both Osprey's military editor Lee Johnson and his authors/artists something of a headache, but the teething pains cannot last forever and the books show great promise. The emphasis is on the 'man as fighting machine' and rather than concentrating on uniforms as in 'Men-at-arms', the focus is on the individual soldier and all his kit with the intention of showing how he was equipped and trained for battle and how successfully he functioned. Forget divisions and corps or even regiments and battalions, this is warfare at the 'grunt' level with only passing reference to any formations higher than company level or equivalent. It is a formula which augurs well but with which the authors of the first two titles obviously had something of a struggle, even though the end results are commendable.

Each book is broken down into clearly defined sections, which it is apparent will work better with some historical periods than others, specifically the pre-mechanisation eras. Following a brief historical introduction, each book is then sub-divided as follows: appearance, equipment, weapons, manufacture and maintenance, psychology and training, tactics, typical engagements, famous individuals, and logistics. In addition there is a chronology, notes on museums and collecting, and an annotated bibliography. The section on 'appearance' is more concerned with the 'why' than the 'what', although there is inevitable overlap, but don't expect minute details of insignia, etc, which are irrelevant to the books' concept. The section on manufacture and maintenance works well in the Norman Knight but less successfully in Waffen-SS Soldier, for fairly obvious reasons, and it can be no coincidence that of the first six titles so far announced, four are mediaeval subjects.

Norman Knight traces the years from the 10th to the 13th centuries. It has very good photographs of preserved items of armour, swords, etc, as well as the inevitable reproductions of sections of the Bayeux Tapestry. The sections on construction and repair give a good introduction to the manufacture of ring, scale and lamellar armour, helped by Christa Hook's excellent colour paintings. Only one 'famous individual' is discussed, Bohemond of Taranto, but the author has not fallen into the easy trap of making Hastings his principal engagement, and discusses several others less familiar to English readers. The sections on

BOOK REVIEWS

training and tactics are particularly

Waffen-SS Soldier discusses the varieties of camouflage clothing introduced during the war, the standard infantryman's equipment with special reference to those items of kit peculiar to the Waffen-SS, such as the Bergmann MP 34/35 SMG - and goes into considerable detail on the subject of psychology and training, showing how the SS trooper differed from his army counterpart. There are really no such things as 'typical' engagements since every encounter has its unique features, and some readers may disagree with Mr Quarrie's selection which, apart from describing Fritz Klingerberg's capture of Belgrade and 'Panzer' Meyer's forcing of the Klissura Pass, is devoted to the massacres at Merville, Wormhoudt and Oradour.

Interestingly, the book's emphasis is very strongly on the SS infantry Grenadier, so we presume Osprey will in due course produce titles on the Panzertruppen, Fallschirmjäger, Gebirgsjäger, etc. Jeffrey Burns' accompanying colour plates are competent but less imaginative than Christa Hook's

The Art of War in Italy by F.L. Taylor, MC, MA. Greenhill; ISBN 1-85367-142-8; 228pp; maps, appendices, bibliography & index; £15.95.

First published in 1920 and long a collector's item, this classic study covers the transition period of warfare from 1494 to 1529, from the mediaeval to the Renaissance. As in all the arts and sciences, this relatively short timespan saw enormous changes in warfare, the most important being the gradual realisation of the importance of balanced forces of all arms and the raising of permanent, trained, standing armies. Two chapters discuss strategy and tactics, with others on infantry, cavalry, artillery and fortifications and siegecraft. Special attention in a lengthy appendix is devoted to the crucial battle of Ravenna in 1512 which saw the first use of Navarro's war carts. This is a scholarly work by an experienced soldier on a truly fascinating period of military develop-

Napoleon's Conquest of Prussia 1806 by F. Loraine Petre. Greenhill. ISBN 1-85367-145-2; 319pp; 16pp plates plus gatefold maps; index; £19.50. Following his defeat of the Austrians and Russians at Austerlitz the previous year, in 1806 Napoleon moved against Prussia, whose war machine really

belonged back in the days of

Frederick the Great. In many ways

this was Napoleon's greatest cam-

paign. His forces moved at incredi-

ble speed towards Dresden, Leipzig and Berlin, bringing the Prussians to battle at Auerstadt (where Davout was heavily outnumbered) and Jena (where Napoleon had the numerical advantage). Both battles were French victories; the pursuit lasted three weeks, leaving the Prussian army totally devastated and demoralised. (The incredible story of its reconstruction and eventual triumph does not belong in this book, though.)

Petre is, of course, one of the most respected of all historians who have specialised in this period, and this addition to Greenhill Books' Napoleonic Library is most welcome.

Clear The Way! A History of the 38th (Irish) Brigade, 1941-47 by Richard Doherty. Irish Academic Press; ISBN 0-7165-2504-6; 336pp; maps & mono photos; bibliography & index; £25.00.

The 38th (Irish) Brigade, comprising battalions of the Royal Inniskilling Fusiliers, Royal Ulster Rifles and Royal Irish Fusiliers, under the outstanding leadership successively Brigadier of M.J.W. 'The O'Donovan', Brigadier Nelson Russel and Brigadier Pat Scott, had a long, hard war. They fought across Tunisia and up the bloody length of Italy to end the war on the river Po, earning a reputation for toughness second to none in battles such as Cassino and Spaduro. This book is thus an excellent campaign account and one which gives an insight into why over the years, so many Irishmen - both Protestant and Catholic - have given their lives in the service of 'the bloody Brits'. Recommended reading.

D-Day, 1944: Voices from Normandy by Robert Neillands and Roderick de Normann. Weidenfeld & Nicolson; ISBN 0-297-81251-3; 252pp; 8pp mono plates; maps, bibliography & index; £17.99.

Compiled from over a thousand written and taped stories as well as the authors' own interviews, this is the story of 6 June 1944, not from the historian's or military strategist's point of view, but from the personal angle of the veterans who were there - army, navy and air force, British, American, Canadian and German. However, there is concise narrative linking the individual accounts into a cohesive whole rather than a disconnected series of tales. After three scenesetting chapters, the book discussed the naval side of the operation ('Neptune') then takes the British and American air drops in turn before dealing with each of the beaches. It is, therefore, not so much a book to be used for reference, but one to be sat and read for interest and pleasure.

Osprey Men-at-Arms series; all 48pp, approx 35 mono illust, eight colour plates; £6.50

MAA 253: Wellington's Highlanders by Stuart Reid, plates by Bryan Fosten.

By extending the period covered to the whole of the Revolutionary and Napoleonic Wars, and by including the many neglected Fencible units (some of which saw more action, in Ireland, than some of the shorter lived Line units), Mr Reid has made a genuine contribution to our reference shelves. There is a lot of solid primary research here, clearly explained and well illustrated. The text explains in detail not only the elements of Highland uniform but also the particular character of the regiments; and lists in note form the history and uniform peculiarities of no less than 25 regular battalions and 27 of Fencibles. The illustrations include many contemporary prints, drawings and paintings, reconstructions of Colours, and a few artifacts. Mr Fosten's plates are a delight: they include several quite new subjects, all rendered to his usual impeccable standard. (Would you believe the future Duke of Wellington in Highland regimentals?) Highly recommended new contribution to a subject too often limited to endless repetition of easy sources.

MAA 254: Wehrmacht
Auxiliary Forces by Nigel
Thomas & Carlos Caballero
Jurado, plates by Simon
McCouaig.

This covers the NSKK, Transportkorps Speer, Reichsareitsdienst, Organisation Todt, and Deutsche Volkssturm. The long text is full of detail on organisation and deployment, with tables of ranks, orders of battle, etc. which go into some depth. These are valuable, particularly in the case of those (surprisingly many) units which, at various dates and places, found themselves committed to a combat or semi-combat role in the war zones. The colour plates are what we have come to expect from this artist: variable, between very nice and slightly odd, but always showing insignia clearly - and the subjects are remarkably colourful, not to say bizarre (eg a named RAD officer with the Close Combat Clasp and four individual tank destruction badges!) Personally we found the Volkssturm information and illustrations the most interesting, and suspect we will see several models in due course. The photos vary sharply in quality of reproduction, but even the foggiest are of some use when compared with the very full insignia descriptions. A marginal subject, which earns this reviewer's grudging enthusiasm by the thoroughness of the treatment, and the sheer oddity of the material unearthed by the experienced JS authors.

The Royal Guards of France, 1661-1763

RENE CHARTRAND

LOUIS XIV, THE 'Sun King', inaugurated changes in the French Army which would, essentially, last until the Revolution. Here we begin our examination of one of the most colourful of all periods of military history.

INTRODUCTION

DURING THE OLD Regime in France, the armed forces played a leading rôle in all affairs. From the 1660s, the regular army considerably expanded. Peacetime strength would be about 200,000 officers and men which would go up to some 400,000 in wartime, most being deployed on the north-eastern border, the traditional invasion route to France. Within this large army was an élite group of units: La Maison du roi - the king's household troops, 12 to 15,000 men, which was largely the creation of one of history's great autocratic rulers, Louis XIV, the 'Sun King'.

Louis XIV was only a fiveyear-old child when his father, King Louis XIII, passed away in 1643. He was crowned in 1654, but his personal reign as the true ruler of France started in March 1661, following the death of Cardinal Mazarin, the powerful prime minister. In the previous Cardinal reign, Richelieu, also prime minister, had laid some of the cornerstones leading to a more central and powerful royal government. Louis now took the process a step further and used his royal powers fully to create an autocratic and centralised modern state. When he assumed personal power in the French army amounted to perhaps 70,000 men. Over the next few year, with the help of the marquis de Louvois whom the king appointed minister of war, the French army was transformed from a rag-tag affair to one of the most modern and powerful forces of its day.

As a child, Louis XIV was deeply marked by an incident during the civil war of the Fronde when the royal family had to flee from the Louvre with a small escort. He never forgot this humiliating experience and resolved that, when he had effective power, a large and powerful body of guards would ensure the security of the royal court. He also felt that some of the guard units should

function as an effective officer's school with gentlemen serving a few years and, when sufficiently proficient in the art of war, appointed to commands in the line regiments. Finally, the king wished the guards to be the élite of the army, gathering some of the best and bravest, to form a powerful reserve which would take the field and be an example and an inspiration to all.

La Maison du roi

It was a tall order but most elements were already there, ready to be expanded and transformed - some would say pampered - by the king's personal attention. Right from the year he took power, and for many years to come, Louis XIV lavished money and attention on the various corps of his Maison du roi, making them the best-paid, best-armed, best-equipped and dressed military formations in Europe. As their fame spread, they were imitated in other countries as they set military fashion.

The various units of the Maison du roi were divided into two groups. First were the guard units du dedans du Louvre which went serving near the king, inside the royal palace of the Louvre and later Versailles. These were the company of Prévôté de l'Hôtel du roi, the four companies of the Gardes du Corps, the companies of Cent-Suisses and the Gardes de la Porte. The second group of guard units du dehors du Louvre - outside the palace - were the companies of the Gendarmes de la Garde, the Chevaux-légers de la Garde, two companies of Mousquetaires de la Garde, the company of Grenadiers à cheval, the regiments of Gardes-Françaises Gardes-Suisses.

Neither inside nor outside the palace was the Gendarmerie de France. It had precedence after the guard cavalry since it answered directly to the king. Furthermore, the king, members of the royal family and



princes were captains of its 16 companies. On campaign, the Gendarmerie de France was considered part of the Maison du roi. It was really a reserve division of the guard cavalry since it stood on its own, élitist, establishment and was not part of the line cavalry.

Since most of the cavalry of the guards *du dedans* had blue uniforms, they were nicknamed *la maison bleue* — the blue household. For the same reason, the cavalry of the guards *du dehors* was nicknamed the *maison rouge* — the red household.

An exhaustive account of the uniforms, weapons, standards and flags of these units is beyond the possibilities of most, if not all, publications and authors, so rich and varied are these items. The number of plates for such a study would, by itself, exhaust most publishers. However, this series will strive to present an impressive number of illustrations from various sources, some having never been published previously. This will form, by the end of all five parts, probably the most complete data ever published on the dress of French Guards.

From the time of their introduction by Louis XIV, the king himself approved the uniforms of each unit of the guard. Several soldiers would be paraded before the sovereign wearing a uniform featuring Guard units during the 1650s and early 1660s. The mounted man at left belongs to the Gentilhommes à Brec de Crobin, a ceremonial gentlemen's company which was not part of the regular household troops. At the centre, a mounted Life Guard wearing a cassock in the royal colours, blue lined red with silver embroidery and lace. At right, a member of the Garde de la Prévôté de l'Hôtel. Plate by Marbot after contemporary engravings. (Anne S.K. Brown Military Collection, Brown University).

the proposed alterations or changes. The guard's uniforms were meant to be splendid affairs. In the cavalry, even privates had gold or silver lace on their coats, and although the colours are often simply describe as 'red' or 'blue', they were made of fine scarlet cloth such as doeskin and the blues were drawn from the best quality indigo. The enlisted men in the infantry had wool lace but their officers wore richly laced uniforms and plumed hats, something frowned upon, and finally forbidden in 1729, to officers of the line infantry.

Blue faced red was the livery of Bourbon kings — indeed, it is still worn by the Spanish royal guards today — and the uniforms of the guard units always had one of those colours. The king's livery lace



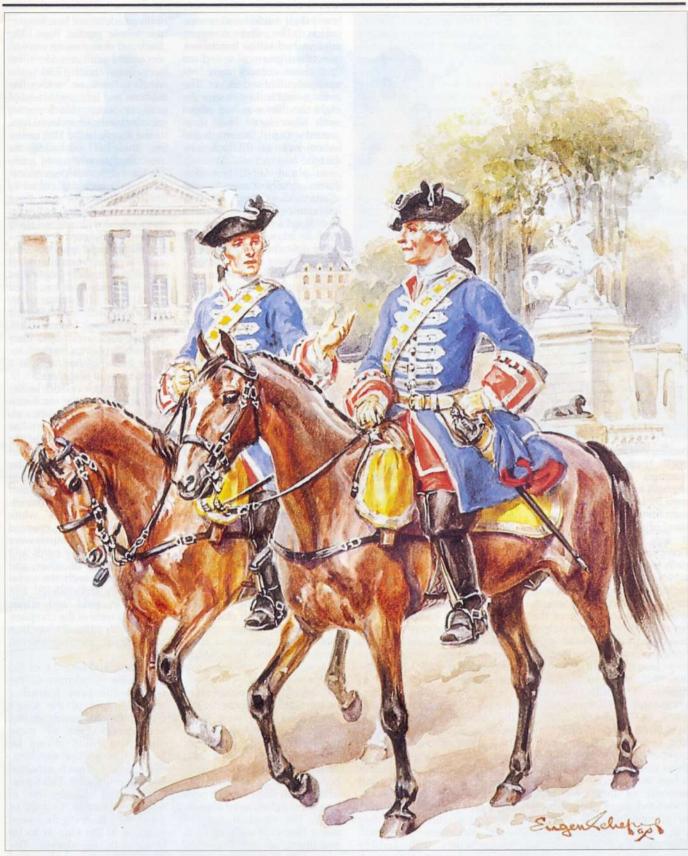
Life Guards on campaign, standing guard by the King's tent during the 1660s. They wore buff coats at this time. The lavishly decorated tent for the sovereign is after a contemporary print. (Plate by Eugène Lelièpvre, reproduced by permission of Le Cimier.)

ornamented the uniforms of musicians in most units and it is important to explain this peculiar ornament. This lace changed every year during the early years of Louis XIV's reign, being usually variations on a checkered pattern of blue, red and white — the royal colours — but, probably during the 1680s, a standard lace was adopted. It came in two forms.

The basic livery lace, usually about an inch wide, sometimes called the 'small' livery, was a red or crimson lace with a white chain thereon. The 'grand' livery was composed of a white central lace with red triangles which was edged on each side by the basic red or crimson lace with a white chain, which made it about 2½ to three inches wide. There was

also a narrow white with red lines livery edging lace. In the guards, except for a few exceptions detailed below, the musicians wore their red-cuffed blue coats almost covered with the king's 'grand' livery, often with silver lace replacing the central white and red portion.

The guard uniforms became more elaborate in the reign of Louis XV while having, at the



same time, a more gracious and relaxed look than in the preceding reign. The weapons, be they swords, pistols or muskets, while following general trends (except for rifled cavalry carbines), were of models peculiar to each unit with luxurious features such as elaborate gold etchings. As for standards and flags, there were many more than in the line regiments. A

guard cavalry company might have four standards (six in the *Gardes du Corps*) as opposed to one per squadron in the line cavalry. Each guard infantry company had a colour compared to three colours per battalion of 13 to 17 companies in the line infantry. In this study, we will follow the evolution of the uniforms of the *Maison du roi* from the time Louis XIV took

personal power, in 1661, to the end of the Seven Years' War, in 1763, when major changes were made in the uniforms of the guards. The units are listed below by order of precedence.

GARDE DU DEDANS DU LOUVRE

Gardes du Corpes

The Life Guards or Body Guards. There were four comTroopers of the Gardes du Corps circa 1750. The yellow and silver bandoliers and housings indicates they are from the 3rd French Company. (Plate by Eugène Lelièpvre, reproduced by permission of Le Cimier.)



panies, originally of 100 men each. Louis XIV raised their numbers to near-regimental strength as they each had 400 men in 1676, reduced to 330 men from 1737. The first company originated back to 1440. It was called the 'Scottish Company' as it had been originally formed from Scots mercenaries but was eventually recruited from Frenchmen in the 16th century. It was considered the senior corps of the royal guards. A curious custom was heard during roll call of the Scottish company when the men would answer Hamir ('I am here') like their Scots forbearers. The three 'French' companies had been raised in 1475, 1479 and 1516 respectively, and were numbered the first, second and third French companies. The seniority of these companies among themselves was according to the seniority of their respective commanders. A Life Guard detachment was always near the King wherever he went. They posted guards outside the rooms where he slept, escorted his food, sword in hand, from the kitchens to his table and generally kept an eye on whoever came near.

The Gardes du Corps wore armour for about three centuries but this had been laid aside by the middle of the 17th century. In the 1650s, they served on foot with halberds as well as mounted with carbines. The Scottish Company wore

Ceremonial guardsmen during the 1660s. At left, a guardsman of the Gardes de la Manche, the élite squad from the Scottish Company of the Gardes du Corps. At right, a guardsman of the Cent-Suisses Company. Plate by Marbot. (Anne S.K. Brown Military Collection, Brown University.)

white cassocks decorated with silver embroidery while the three French companies had cassocks 'of the King's colours'— the blue, red and white or silver of the royal livery embroidered with his badges and devices.

Once Louis XIV took effective power, uniforms based on the colours of the royal livery were on their way. In January 1665, their officers were 'permitted' by the king to wear a blue coat with gold and silver lace - a royal prerogative and a sign of things to come. On campaign during the War of Devolution (1667-1668), they wore sleeveless fine buff leather coats with lavishly laced undercoat sleeves. A short-sleeved buff cloth coat, emulating the leather coat, was commonly worn when serving in the palace. With this was a profusion of ribbons and hat plumes in the latest fashion of the time. A white sash around the waist was often worn. The Gardes du Corps had silverlaced bandoliers of distinctive colours for each company, worn over the left shoulder to

carry their musket and ammunition. The first company always had white bandoliers, the others green, blue and red but these colours were not quite standardised as yet. The wide sword belt worn over the right shoulder was buff edged with silver lace. They were armed with pistols, swords and wheel-lock or flintlock carbines.

In about 1668, true uniforms finally came to the Gardes du Corps. All four companies adopted a blue coat lined and cuffed with red and laced with silver. They were described at a review in 1679 wearing a blue coat with silver lace 'more' than an inch wide at all seams, red velvet cuffs with two silver laces on each, the bandoliers having three wide and two narrow silver laces. The sword belts and gloves were buff laced silver. white sashes, silver hilted broadswords, silver edged hats and silver laced housings. The 1st Company had white bandoliers and green housings, the 2nd Company had green bandoliers and housings, the 3rd Company had blue bandoliers and housings and the 4th Company had yellow bandoliers and housings. These colours for the bandoliers thereafter remained the same except for the housings of the 1st Company which were changed to red. From 1676, rifled carbines were issued to nearly a quarter of each company. The broadswords of the first company were Scottish claymores with steel basket guards whereas the three other companies had the French-style heavy cavalry sword, also with a steel guard.

Thereafter, the colours worn by the Garde du Corps did not change but there were some variations in the trim, due to the usual influences of fashion. During the late 1680s or early 1690s, the bandoliers of each company were further garnished with silver lace so as to give them a chequered appearance. The standard uniform was a blue coat with red cuffs and lining, silver buttons and silver lace at the buttonholes and edging the coat, the cuffs having two rows of lace, the pocket flaps having two rows

with an additional lace framing the whole pocket flaps. The back and sleeve seams were all decorated with a wide silver lace from about 1730.* The waistcoat was red with silver buttons and lace; red breeches and stockings; black heavy cavalry boots; silver laced hats. In the middle of the 18th century, the hat cockades are described as white and green for the 1st 'Scottish' company, and white with the colour of the bandolier for the three 'French' companies. Housings were edged with a broad silver lace.

Officers were reported 'covered' with lace or embroidery in 1679 but were somewhat less luxurious later on. Their coats were still quite richly decorated with silver lace at the buttonholes, seams, edges, pocket flaps and cuffs. They had white plumes on the hats. Their housings had at least a double row of silver lace.

The trumpeters and kettledrummers wore the same uniform as the other Gardes du Corps with additional trim. The coats had false sleeves in the back and were almost covered with wide silver lace so that the blue showed in narrow strips in between the silver. The waistcoat had broader lace. The silver-laced hats had white plumes. Belts were covered with silver lace. Trumpets were of brass with silver cords and tassels, kettles of silver and banners blue with the royal arms richly embroidered and fringed in gold and silver. Housings were of the company colour with a broad silver lace and a slightly narrower one just above.

Sixteen, and later 24, of the most élite guardsmen of the Scottish Company formed a special squad of the king's most personal guards during ceremonies. Two 'of these guardsmen could always be found just behind the king, even during church services, with others nearby. This squad was named Gardes de la Manche, literally 'Guards of the sleeve', meaning they were so close to the king as to be brushed by his sleeves. The Gardes de la Manche had gold embroidery rather than silver on their white cassocks. The halberds had gilded spears and gold tassels according to a 1656 register. This cassock remained apparently unchanged until 1679 when the king saw fit to grant them a new and even more luxurious type of cassock. It was of white silk shaped like an 'antique' cuirass with skirts and covered with

^{*} The way this lace was set exactly remains enigmatic. Large loops with rounded ends are shown as early as 1735 by Gudenus and later in the 1760 manuscript illustrated in this article. A circa 1735 painting by Parrocel shows an officer with large rounded loops as does an officer's portrait of the 1740s. But loops with more pointed ends are also shown by Delaitre (1720-1724) and Chéraux, whose 1757 publication shows uniforms which could be up to ten years earlier.

magnificent embroidery in gold and silver, with other colours to enhance the work, which covered the entire garment with palms, laurels 'and all sorts of trophies' with the king's badge, the sun, and his personal motto Nec pluribus impar embroidered over the palms and laurel on the breast at the back. The skirts and short sleeves were also profusely embroidered with trophies and floral designs. It was worn over the regular uniform coat. The polearm was a gilded partisan head with elaborate engraving mounted on a pole covered with blue velvet and gold nails and a large silver tassel. This magnificent dress remained the same during the 18th century.*

Cent-Suisses

The Hundred-Swiss. This company of palace guards originated in the last decades of the 15th century when King Louis XI first retained a company of Swiss soldiers for his personal guard in 1480. The company existed for over three centuries serving the French royal family.

The company dressed in Swiss costume 'after an antique manner' which, by the reign of Louis XIV, had become its full ceremonial dress. It consisted of 16th cen-

* For coronations and other highly ceremonial state occasions such as the coronation of Louis XV in 1724, a small squad of *Gardes de la Manche* wore, with the embroidered white cassock, an all-white "antique" uniform consisting of a coat, baggy breeches, stockings, white shoes, white hat with white plumes. In state mourning, such as at the funeral of Louis XIV in 1715, they wore black.

tury style slashed jacket and baggy breeches, both being red on the right side and blue on the left side, profusely laced with royal livery colours of red and white, white stockings with red and white garters, white gloves with red, white and blue fringes and shoe bows. A stiff white embroidered collar was worn around the neck. The cap was of black velvet with a white plume. They were armed with 'a halberd made in the shape of a partisan, upon which is the king's arms in gold' and gold hilted straight swords, according to Zur-Lauben's 1751 Histoire militaire des suisses.

For ordinary duties, they wore a blue coat with red velvet cuffs, red lining, gold buttons and crimson ribbons on the right shoulder; blue waistcoat with gold buttons, edged with gold lace and further ornamented with the king's 'grand' livery lace; blue breeches and stockings; goldlaced tricorn; white bandolier covered with 'grand' livery lace and edged with red, white and blue fringes. This uniform changed in 1759 to a blue coat with red cuffs and red lining, gold-laced buttonhole and a broad gold lace edging; red waistcoat and breeches, goldlaced tricorn.

By the late 1730s, a campaign dress had been added. It consisted of a blue coat with red cuffs and waistcoat, gold lace edging on the coat and waistcoat. On campaign, the

Cent-Suisses served with grenadiers of the Swiss Guards, wore bearskin grenadier caps and were armed with muskets with bayonets.

Officers did not have the Swiss style 'antique' ceremonial uniform but wore completely scarlet coats, waistcoats, breeches and stockings with gold buttons and gold lace. For campaign, they likely had the same colours as their men.

Drummers appear only to have added a drum belt covered with livery lace (and apparently gold lace at the centre) for the ceremonial order of dress. The other uniforms would be trimmed with livery lace. The drums were blue with the royal arms and other devices in gold.

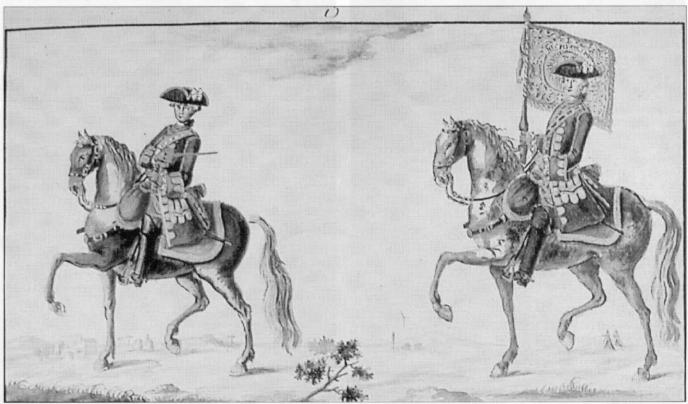
Gardes de la Porte

The 'Guards of the Gate'. Possibly the oldest of all guard formations, being 'almost as ancient as the monarchy' according to chevalier de Guignard's history. It was a company of 50 men with five officers whose duty it was to watch the main gates of the king's quarters from six in the morning to six in the evening, the night guard being taken up by the Gardes du Corps. Up to about 1670 they wore a blue cassock lined red edged with silver lace upon which was embroidered crossed keys in silver. Thereafter, they had a uniform consisting of a blue coat lined and cuffed with red. laced profusely with silver and gold mixed, red waistcoat, breeches and stockings, black hat with silver and gold lace and a white cockade. The bandolier was covered with chequered gold and silver lace. This company did not serve in the field. It served on foot and was armed with swords and carbines. Officers, at least in the 1720s, wore the same colours with silver lace edging the coat which further had silver and gold embroidery, hat with white plumes and silver embroidered border, gold hilted sword.

Gardes de la Prévôté de l'Hôtel This was a police-type company originating in the 16th century. At the time of Louis XIV, it had 100 men posted at Versailles and the Louvre. Its ceremonial dress consisted of a white silk cassock with elaborate gold embroidery of lilies and crowned 'L' which also included a 'Hercules' axe on the chest, the cassock's sleeves and skirt being red, white and blue with gold embroidery. The uniform was the same colours as the Gardes de la Porte, but with gold lace and buttons. This company did not serve in the field. It served on foot and was armed with swords and carbines.

To be continued

Trooper of the Scottish Company and standard bearer of the 1st French Company of the Gardes du Corps according to a manuscript given to the king of Spain in 1760. (Patrimonio nacional, Madrid.)





Above: Guardsman of the Gardes de la Manche, the élite squad the Gardes du Corps, circa

from the Scottish Company of 1750. (Anne S.K. Brown Military Collection, Brown University.)

Below:

Garde de la Porte, circa 1750. (Anne S.K. Brown Military Collection, Brown University.)





Below:

Garde de la Prévôté de l'Hôtel, circa 1750. (Anne S.K. Brown Military Collection, Brown University.)

Above:

Guardsman of the Cent-Suisses company, circa 1750, wearing the elaborate 'ancient' ceremonial uniform inspired from the 16th century. (Anne S.K. Brown Military Collection, Brown University.)



Escape in Winter: Germany's Dunkirk, 1945

IT IS NEARLY fifty years since one of the largest organised evacuations in the history of mankind. This was in the face of powerful Russian armies, in the middle of a particularly bitter winter. Over two million people escaped by sea from the Gulf of Danzig and adjoining areas, between the end of January and 9 May 1945.

The majority were civilians who fled under conditions of incredible hardship and privation, so great was their terror of the invading Russian soldiery. Impetus was given to their panic-stricken flight as substantiated reports of rape, looting and murder spread throughout the region.

German units briefly recaptured Nemersdorf which had been one of the first East Prussian towns to fall to the Russians. General Kreipe was touring the combat zone, and he wrote in his diary: 'Visited Hermann Göring Panzer Korps, in combat at Gumbinnen. Gumbinnen ablaze. Refugee columns. In and around Nemersdorf women and children crucified on barn doors and shot. I order photographs taken as evidence.'

Many of the long refugee columns made for the narrow coastal strip fringing the Baltic Sea. This appeared to offer the shortest route to temporary protection behind the German lines — and, more importantly, an escape avenue to the West.

Erica Hildebrandt, then a young wife, remembered the scenes vividly. 'For the past two weeks endless columns of refugees have been passing through, making their way



IAN GALLAGHER

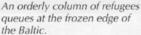
AS THE SOVIET armies pressed through the Baltic states and into East Prussia at the beginning of 1945, millions of civilians and soldiers formed huge columns trudging towards the coast and the hope of evacuation to the west. The weather was appalling, and tens of thousands died from exposure or shellfire; but over two million escaped to comparative safety in one of the most remarkable operations of the war.

from the east back to the German heartland... Horses slip and stumble as they pull the chains of covered carts along the roads that lead west. Most of the carts have women leading them. Small children, frozen blue with the cold, lie among the bundles and sacks. Even the furs that they are wrapped in offer little protection against the freezing winds. They neither speak nor cry; they die mutely and mutely they are buried in the roadside ditches... The gunfire is getting nearer. The whips crack on the

backs of harness-sore, exhausted horses. Day and night they move on. Who knows what suffering and misery still awaits them?"

Fortuitously a number of large passenger ships were already stationed in the Baltic as floating dormitories for U-boat technicians, sailors, and rear echelon troops. They had been anchored off Danzig, Pillau, and Gotenhaven; and in this emergency were hastily pressed into service.

Hitler appointed Admiral Dönitz to mastermind the evac-



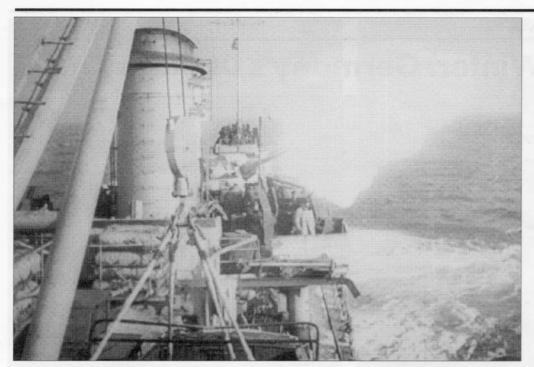
uation, and Rear Admiral Engelhardt of the Wehrmacht Naval Transport Command carried operational responsibility. The force he scraped together was composed of a variety of vessels of the German Navy and Merchant Navy. They worked out of large ports such as Memel, Königsberg and Danzig, and smaller ones such as Hela and Pillau.

The enormity of the task meant that in the closing stages it resembled a gigantic Dunkirk, and people were forced on to the beaches where at times they queued under shellfire, waist deep in the icv waters of the Baltic. Others were escaping by sea apart from the homeless refugee columns. These were soldiers from the remnants of Army Group North and Army Group Centre. Many of them were wounded, and had been forced by the Russian onslaught into a position where their backs were to the water.

Desperate fighting had ensued when four Soviet armies attacked the German lines in September 1944. Estonia was evacuated, and the German Sixteenth Army pushed back until it was only ten miles from Riga. This meant that 200,000 German troops were trapped in the Courland 'peninsula'. Numbers of specialists and some equipment were brought out of this pocket, but Hitler stubbornly refused to countenance a complete evacuation. Instead he



A bitterly cold trek across the ice.



renamed it 'Army Group Courland'. There it remained as a 'forlorn hope', withstanding at least six major attacks until the war ended seven months later.

A bridgehead was held around the naval base of Memel (now Klaipeda) some 150 miles to the west, and fierce combat ensued around its ever-shrinking perimeter. Boats were continually moving out wounded soldiers and refugees, and bringing in a trickle of munitions.

However, in this particularly bitter winter, the Baltic froze along its shoreline, as did the long lagoons such as the Frisches Haff, which are a feature of this coast.

Finally the Führer reluctantly agreed to the demolition of Memel's docks, and the abandonment of the city. Some troops escaped over the ice from its ruins, and others came out by boat. They were then pressed into service to shore up the crumbling defence of the narrow coastal strip to the south-west.

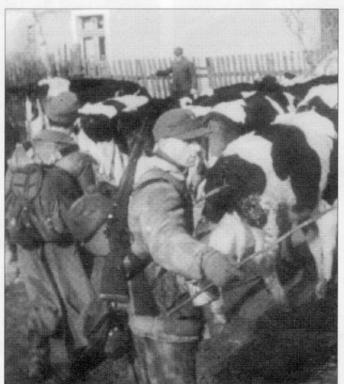
It was not only soldiers who made this perilous passage over the ice. Many thousands of refugees set out into the Arctic conditions. Their lengthy columns trudged on foot beside the covered waggons drawn by farm horses; and they huddled in the lee of these carts which carried the old, and the young, and the wounded. The enemies on the trek were not only the sub-zero temperatures; but persistent Russian attempts to

German soldiers help drive cattle away from the invading Russian armies. break the ice by attacks from fighter bombers.

They reached the low sandbar which fringes the Courland lagoon — the Nehrung; and this offered them a tenuous land route to Danzig. Over 700,000 civilians came into the city by this route.

Hedwig had been a farmer's wife in East Prussia, and together with her two sisters and three young children had fled towards the coast, and managed to reach the small port of Pillau. 'The next day it was announced that the ships were leaving for Germany. Thousands of people pressed forward. Everyone wanted to save themselves. We managed

to get on to a transport ship that had been previously used for carrying horses. Old people and children were lowered the 20 metres into the hold on a rope. Others had to use a ladder. If the height made you dizzy it was just too bad. You got left behind. No one cared. Everyone was shouting and scrambling to get a place to sit. We tried to make ourselves comfortable on top of our bundles. For two days the ship waited to sail, whilst minesweepers attempted to clear a passage out. We came under artillery fire on one occasion, and the ship was hit. Finally we sailed Götenhafen, near Danzig.



A German destroyer gives close fire support.

There were 3,000 refugees on board...'

Minesweepers played a major role in keeping open the evacuation lanes, for some of them were equipped with a newly developed radar. This was the 'FuMO 81 Berlin S'. which proved to be a highly accurate shipboard system. An E-boat fitted with it led out over one hundred smaller vessels crammed with 20,000 refugees. This was at night under shellfire. Its new radar located a narrow gap in the minefields, for the buoys marking the channel's edge showed up clearly on her radar screen.

Evacuation boats always crammed to overflowing and beyond. Each of the larger passenger ships such as the Wilhelm Gustloff, the Cap Arkona, the Deutschland and the Robert Ley, lifted between 5,000 and 9,000 refugees at a time. Indeed, two days before Danzig fell the Deutschland managed to squeeze 11,295 aboard. Danzig was particularly crowded because in the operation's early stages it had been a receiving point. This was when sporadic rail links to the west were still open. Otherwise various ports in Denmark and Schleswig-Holstein were used.

Towards the end of January the cruiser *Emden* came into Pillau carrying the sarcophagus of the late Reich President Hindenburg. Hitler had instructed that it too should be evacuated!

In the beginning, in the interests of speed and rapid turnround, the largest and fastest boats sailed without escort. Some of them had been employed pre-war on 'Strength through Joy' cruises; there was little joy to be found in their current employment.

Finland's withdrawal from the war gave the Russians control of their naval base at Hango. This meant that in October 1944 Russian submarines were at last able to escape from the blockade which had imprisoned them for so long in the Gulf of Finland. They could now start operations against German evacuation routes in the Baltic.

\$13, a Russian submarine operating out of Hango, had been on patrol for three weeks when she sighted the liner Wilhelm Gustloff. This was off the Gulf of Danzig on 30 January. She attacked with a salvo of four torpedoes. Three out of four struck home. The exact number of people

drowned has never been ascertained; certainly she was carrying in excess of 7,000 people, and only 882 were pulled from the sea. The scramble for embarkation at Danzig had been such that no proper nominal roll of passengers existed.

It was many days before the German authorities would admit to the loss of the ship let alone the scale of the tragedy. The number drowned made this the world's worst shipping disaster. A large cruiser, the Admiral Hipper, was one of the first vessels to respond to the SOS call, and her early appearance must have been heartening. However, she had 1,500 wounded on board and because of the danger from submarines it was deemed too dangerous for her to stay. She was forced to turn away leaving many survivors to drown.

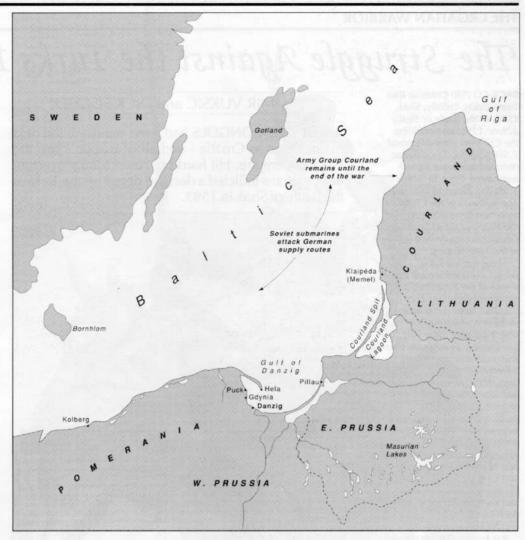
Ten days later this same submarine sank the passenger ship General Steuben. This time there was a close escort, but it was early February and the sea temperature was low. In spite of their best efforts only 300 out of 3,000 people were alive when pulled from the freezing waters.

As the relentless pressure from the Russian land forces increased, so did the unremitting efforts to evacuate the hundreds upon thousands of refugees and wounded trapped in these awful conditions along this length of coast.

Fire support from German naval vessels seems to have been the main reason why the troops endured for so long. The whole of this area saw elderly battlecruisers, training vessels, and destroyers, firing at near point-blank range over the heads of refugees and German soldiers alike, their salvoes of shells breaking up attack after Russian attack, and buying more time for the evacuation.

It requires little imagination to envisage the scenes as the mixture of civilians, troops, and wounded were evacuated under fire — first on to shallow draft barges which could reach close to the beach, and then transhipped on to the larger transports standing offshore. The naval beachmasters superintending the loading were under enormous pressure to ensure that it did not degenerate into an uncontrollable riot.

Civilians and soldiers were not the only ones brought out. The commander of the 22nd U-Boat Flotilla defied orders to scuttle his boats and hand over his sailors for ground defence duties. He led his flotilla of 26 boats and depot ship, crowded with the wives, children and



fiancées of his sailors, safely to Kiel. Their rations were eked out with pigs belonging to a farmer friend, driven down and slaughtered on the quayside. The farmer and family were given passage to safety.

The strength of the Russian attacks continued to increase, however, and their air support continued to grow. Refugees and troops were compressed into a shrinking area as one by one the ports and beaches available for embarkation were lost. By the end of April only Hela remained. This was a small fishing village at the very tip of the long sandy peninula which curves far out into the Gulf of Danzig. Here, under the cover of a massive barrage of fire from anti-aircraft ships, destroyers, and gun barges, the last evacuations to the west were made.

The capitulation of German troops in north-west Germany, Denmark, and Holland took place on 4 May, and the unconditional surrender of the German Wehrmacht came into force early on 8 May.

In order to expedite evacuations the faster warships unloaded their refugees in the roads off Copenhagen and returned to Hela on 7 May. Here they loaded 20,000 soldiers and refugees who were disembarked in Glucksburg on 9 May, and on the same night the freighters *Weserberg* and *Paloma* set out with 5,730 refugees. This was almost the last organised lift of refugees from the Gulf of Danzig, and they were fortunate to escape.

In contravention of the cease-fire agreement, the final convoy seems to have been underway on the day following total surrender. This was from Windau, northeast of the Gulf, and carried some 11,000 troops in small and medium sized craft of the German Navy. They had refused to lay down their arms, and were pursued by Russian units. A few of the slowest boats carrying 300 soldiers were captured; the rest succeeded in reaching their destination - surrender in the

The area covered by this account is now divided between four countries. They are Poland, Lithuania, Latvia and Russia. Poland's share takes in 311 miles of the Baltic coastline. Parts of it are pictured in Fodor's current guide to 'Eastern Europe'. Thick, fra-

grant pine forests begin at the beach edge, their inviting paths lined with little refreshment stands selling strawberries, raspberries, and blueberries, which you can take back to the sand and eat with fresh cream.'

What a stark contrast this all presents to the scenes on and around these same beaches in that icy winter of 1945.

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The Struggle Against the Turks 1400-1600

BACK COVER: Croatian Ban Toma Bakac-Erdödy, Sisak, 1593. In the battle of Sisak, 22 June 1593, commanding the Christian army of around 5,500 soldiers, Toma Bakac defeated the larger Turkish army three times, in which the Turks lost about 10,000 men. The make-up of the Christian army was generally typical of the troops of the Military Frontier during the last quarter of the 16th century.

The governor (ban) personally commanded the troops of the Banal hussars and those called up from the Croatian lands (other hussars mobilised in the event of war), which together came to 1,240 cavalrymen. In addition, there was a German armoured infantry regiment of 1,500 men, 100 German mercenary infantry, 300 mounted arquesbusiers and 160 musketeers from the Karlovac fortress, 500 Silesian armoured riders, 300 mounted arquebusiers from Slovenia, 400 hussars from Slavonia, 500 Uskoks, 100 cuirassiers of the Montecuccoli regiment and six troops of local nobles, each consisting of between 11 and 80 hussars.

It is known that, on the day of the battle, the Croatian ban wore Italian field armour without excessive decoration, an open morion helmet with a red panache. He rode a massive horse which was partially armed and covered with a decorative caparison. Although not mentioned in the sources, he probable wore a red silk shawl, normally worn across the left shoulder by someone of his rank, and tied in a knot on the right side. Among the Croatians a decorative mace was the mark of officer rank.

Pictured is Italian armour of the Pisan type from about 1580 and a morion with a high comb forged in one piece. The peytrel was made in Germany around 1525 and came from the collection of Prince Radziwill from Poland.

The great Genoese general Marquis Ambrogio Spinola, chief commander of the Spanish army in the Netherlands, is wearing armour of this type in the portrait painted of him in 1625 by Peter Paul Rubens. In Van Dyck's portrait, John Count of Nassau-Siegen, commander of the forces in the Netherlands, is portrayed wearing half-armour of this type.

VELIMIR VUKSIC and DICK FISCHER

AFTER THE MONGOLS had been repulsed, the next major threat to Croatia - and all of Europe - was the Ottoman Empire. Hit hard but never totally overrun, the Croatians inflicted a decisive defeat on the Turks at the battle of Sisak in 1593.



IT WOULD HAVE been impossible for any knowledgeable observer studying the Balkan peninsula at the beginning of the 15th Century to predict with any degree of accuracy what would happen to its peoples, like the Croatians, over the next several hundred years. Would they even continue to exist as a district nation, amidst the powerful forces around them? Or would they be simply absorbed by those with more strength? After all, this had been the destiny of so many other peoples, who had had their moment in the sun, but would then lose

A hussar from the first half of the 16th century. In the battle at Mohacs field in 1526, 300 cavalry took part together with the bishop of Dakovo. These cavalrymen brought trained dogs with them - the wellknown Dalmatians. These dogs were trained to attack Turkish horses, thereby stirring up confusion in the enemy ranks. The illustrator has faithfully portrayed the hussar's appearance. This type of short cap, worn on a shaved head, was very popular in Croatia through the whole 16th century. The hussar is sitting in the saddle like a jockey, which was characteristic of cavalry who shot a composite bow and arrow from their saddles. In the hussar units one group of warriors was to skirmish with their opponents, and another was armed with lances for close combat, as shown below, right.



Hussar, early 16th century. During the reign of King Matthias Corvinus near the end of the 15th century, a new type of cavalry appeared in the Croatian-Hungary state, called hussars. In King Corvinus' mercenary army, the 'Black Troops' — similar in strength and organisation to the Burgundian army of Charles the Bold — fighting alongside the Bohemian infantry, German heavily armoured cavalry and the Italian crossbow archers, the most numerous Croatian and Hungarian element was the light cavalry — the hussars. At the late 15th and early 16th centuries, the hussars were most recognisable as light, unarmoured cavalry armed with a heavy lance, which had been reserved until then only for the heavily armoured cavalrymen. When armed in such a way, together with their great speed, the hussars had striking power which, in the right situations, enabled them to attack armoured and heavily armed opponents. After their bitter defeat against the Turks on Krbava field in 1493, which wiped out the flower of the Croatian nobility, and the defeat at Mohács in 1526, most of the hussar type Croatian cavalry adapted their approach to the war on the border. Pictures and graphics from the beginning of the 16th century portray hussars in rich renaissance uniforms on which only the buttons and chest decorations have elements of the 'eastern influence', which would be retained for some time. Their ornate renaissance dress had no characteristic head covering, but multicoloured hats and caps of various shapes existed, decorated with various coloured plumes. The hussars' armament combination consisted of a heavy lance, a sabre, the characteristic targe shield with a small recess for the lance, and the composite bow.

their identity, language, ethnic customs and institutions, effectively becoming an invisible part of the larger nation that had absorbed them.

This same destiny could have befallen the Croatians easily. Having been then already united for 300 years with Hungary under a Hungarian king, they had minimal influence over anything other than their local government affairs. There always were Croatian nobles in

high and influential positions in the court in Buda, it is true, but there is no denying that Croatia's interests were far from the primary concern of the ruling élite.

Sigismund of Luxembourg (1387-1437) was chosen by the nobility as their new king against a backdrop of widespread Croatian antagonism, which flared up into a 30-year long civil war with the nobility severely divided. But even having once established his author-

ity, Sigismund still remained largely preoccupied with events to the west, giving his attention to Bohemia, Germany and the Holy Roman Empire. Consequently, he greatly underestimated the threat picking up steam in Asia Minor and on its way up the Balkan peninsula.

Initial Turkish expansion

Bursting beyond their small borders in Asia Minor, the Ottoman Turks were a major military power to be reckoned with by the middle of the 14th century. After succeeding his father Osman, Sultan Orkhan (1326-1362) thoroughly reorganised the military and state administration. He formed a new, highly devoted, standing army — the janissaries — introducing greater specialisation of forces, and forcibly recruiting, isolating and training special boys (devsirme) from his conquered territory who would grow up to

Croatian light hussar, second half of the 16th century.

Most of the hussars called up under their standard when the threat of war was greatest were of the light, or unarmoured, type hussar, most frequently seen as mercenaries across the battlefields of Europe. These light, as distinct from armoured hussars, were generally armed with firearms. At the end of the 16th century these were called arquebusiers.

The weapons and equipment of the horse were identical for both the light and armoured hussars. The hussars carried their characteristic targe (German Tartsche) shield, very often decorated with a hand holding a sword or raven wing. Their lance pennants were most often red, or red and white, with sacred motifs. The Croatian hussars, unlike their Hungarian counterparts, wore a cap with different furs in the front. usually from fox, wolf or marten. Both the infantry and cavalry had the custom of rolling up the front flaps of their long coats and tucking the ends in their belts. With time that part of their coat was cut off so that its front was shorter than the back.



become fanatically devoted fighters on the Sultan's behalf. The Turkish light and mobile cavalry, the *akinjis*, was regularly sent on even far ahead of their oncoming ground forces to raid, pillage, enslave and generally destroy whatever was in their path before returning to their lines. The Sultan's reorganised army quickly demonstrated its superiority over whatever stood in its path.

Once crossing over from Asia Minor to Gallipoli in 1354, the Turks penetrated swiftly into the heart of the Balkans. They quickly overran Bulgaria, and defeated the Serbs in a major victory on Kosovo field in 1389. From that point the Turkish expansion moved in all directions, but primarily and relentlessly toward the north-west, with one of its arrows pointed toward the Pannonian plain, directed at Buda and Vienna, and the other paralleling the Adriatic coast aimed at Slovenia and Italy.

Turks overrun Serbia and Bosnia

But as bad as the *akinjis* were, what was to prove even more significant to the peoples ahead of them was the steady expansion of the Ottoman state up the Balkan peninsula right into Europe, incorporating one after another of the subject peoples into Ottoman provinces as part of the empire itself.

The lands to the south and east of Croatia - Bosnia and Serbia — which had been under the practical control of competing, local, powerful nobles were only able to maintain their positions temporarily by shrewdly finding the middle course between the Hungarians and the Turks. Depending on the immediate pressure being placed upon them at the time, these dukes and despots often agreed to pay tribute and become vassals of first one and them the other, in exchange for a number of years of guaranteed peace.

As Hungary's neglect of its

southern allies resulted in continued military ineffectiveness, and as the huge Ottoman armies proceeded relentlessly north and westward, one after another of these vassals gradually fell under Turkish control. The great fortified cities of southern Serbia bowed to the Turkish sword -Nis (1386), Zvecan province, only able to put up minimal resistance. After that defeat, a large number of Bosnia's nobles converted to Islam, which enabled them to hold on to their possessions and keep influential positions in their society.

The effect on Croatia

After finally putting down the Croatian nobles' challenge to his rule, King Sigismund belatedly gave his attention to stopping the Turks. Together with an army of knights from western Europe, Sigismund confronted the Sultan at Nicopolis in 1396, only to be badly defeated there, barely escaping with his life.

Shortly after that, the ground began to be laid for the Sultan's

attention to Croatia, Raids of plundering cavalry were repeatedly sent up past the Sava river into eastern Croatia (Slavonia) and Hungary, even occasionally deep into Slovenia. During this time numerous governors and dukes distinguished themselves by standing up to these fierce raiders, occasionally engaging and defeating them as they returned from their raids, when they were loaded down with plunder captives. and Nevertheless, these plundering commando raids onto vulnerable Croatian territory were to continue off and on for several centuries, demoralising and terrorising the population.

Throughout the 15th century, defence of the Croatian lands was effectively in the hands of the Hungarian crown. These territories proved to be rich source of soldiers and officers from which to recruit for the Hungarian army, who then distinguished themselves in the wars for the crown in Western

Europe, even sometimes at the expense of their own homeland. For from the Turk's increasingly secure positions in Bosnia and Serbia, parts of Croatia itself were constantly being hit from the east and the south.

Having gathered the best of Croatia's nobility together to challenge the Turks returning from one of their raids in 1493, Croatia's new governor, Emerik Derencin, rejected the advice of his most seasoned warriors to select more favourable terrain and chose to engage the more powerful Turkish cavalry on the open field. The outcome was disastrous for Croatia's defence. There on Krbava field a great number of Croatian warriors were slain, and almost the whole Croatian nobility was destroyed.

In 1513 Archbishop Bernadin Zana of Split recorded his observations about the misery accompanying the Turkish invasion. They took children from the arms of their parents, and from the breast of their mothers, raped women in front of their

husbands, and simply cut down the elderly and older relatives right in front of their sons and grandchildren like unnecessary plunder. These accounts would be repeated over and over again throughout the land.

The fall of Hungary

Hungary's southern defence outpost in Belgrade had been able to hold out for a time with Hungarian-Croatian support, having successfully withstood two major sieges. But by the 16th century Hungarian court was suffering under social unrest and internal strife between rivals for the throne, badly depleting its ability to stand up effectively against the threat on its southern border. Seeing this, Sultan Suleiman moved a huge army up into the Pannonian plain in spring 1521 to realise his dream of establishing Ottoman power in the heart of Christian Europe. The Turks overran Hungary's defence outposts in Belgrade in August 1521, thereby exposing the whole Danube basin. In 1526 the Sultan and a huge army conquered the last river defences, Petrovaradin on the Danube and Osijek on the Drava, clearing the way north into Hungary proper. Once again Hungarian court took too long to appreciate the imminence of the threat facing them. So, on 29 August 1526, the Turkish army, far larger and better equipped with artillery, dealt the combined Hungary-Croatian forces a disastrous and total defeat on the field of Mohács. Within two weeks the Turks would burn down the cities of Buda and Pest and loot the royal palace before returning home.

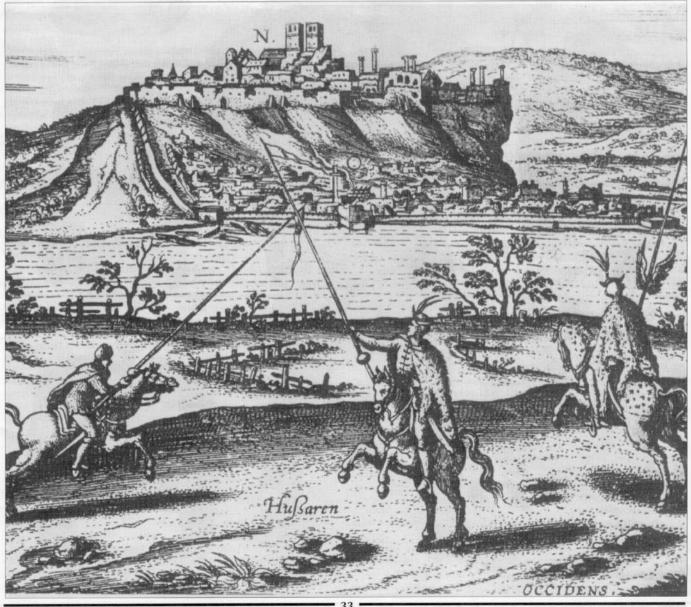
The Habsburgs assume control With the death of King Louis at Mohács and the fall of Buda, the Hungarian-Croatian state union collapsed. Since Louis had left no heir, a power struggle developed the between Transylvanian duke, Ivan Zápolja, and the Austrian noble, Archduke Ferdinand of the great Habsburg dynasty. Although badly split, the Croatian nobility finally selected Ferdinand as their king, on 1 January 1527, at

least partly because of promises of aid (which he never delivered) for their fight against the Turks. But the continued factional fighting throughout all northern Croatia was very deep. All this played right into the Turk's hands, initially enabling him major conquests of Croatian cities in the west, south of Senj. By 1541 the Turks took permanent possession of Buda, and had occupied vast areas of Slavonia as well, which reduced free Croatia to just an impoverished fraction of its earlier territory

Hit hard but never overrun

Croatia's early defence forces had initially been organised all along the shifting frontier with the Turks, under whomever

The length and appearance of the lance can be clearly seen in this graphic from 1605. The hussar on the right is interesting. His lance is decorated with two pairs of hawk wings, and on the body of the horse there is a drawing of (probably) moons and stars.



could equip them for battle. But with the nobility devastated economically, help was increasingly needed from abroad. Consequently, one of Ferdinand's early acts was to establish a Military Frontier, a line of fortified cities and towns along a defensible border with the enemy, placing the defence and administration of the territory directly under the control of the Habsburg crown. Two well fortified cities along its river defenses, Sisak and Karlovac, served as mainstays to dissuade

the Turks from penetrating up toward Zagreb in their goal of clearing their way toward Vienna.

By 1592 the Turkish commander, Hasan-pasha, had decided to moved decisively against the border defences south of Zagreb, turning his attention to Sisak. After the small garrison repulsed the first several attempts to besiege the city, on 15 June 1593, with an army of 10,000 men, the Turks laid siege to the city for the third time. In what would prove to be

one of Croatia's most brilliant battles, the combined Croatian and Military Frontier armies hurried to Sisak and engaged the Turkish commander and his forces. Within the first two hours the Turks were already decisively beaten, and the heart of the Croatian state had been defended. The battle of Sisak marked the decisive turning point in the war against the Turks.

But it would not be until 90 years later, in September 1638, when the combined Polish, German and Austrian Imperial armies handed the Turks a surprising but decisive defeat outside the gates of Vienna, demonstrated that the tide had turned forever against the Turks. Over the next eight years the Ottoman armies suffered defeat after defeat on the Croatian and Hungarian lands, and soon Croatian territory was finally liberated from Turkish occupation forever.

Glorious defenders of the Croatian nation

As could be expected, the long wars against the Turkish



invaders gave opportunity for countless acts of courage, daring and military adroitness, many of which have been lost from history. Records of some Croatia's greatest warriors and their exploits have managed to survive intact down to our time. Among them are Nikola Jurisic (who, in 1532 with 700 men, defended the Hungarian city of Köszeg against the Sultan, effectively preventing a second siege of Vienna); Petar Kruzic of Senj (who, with his 'uskoks' repulsed numerous Turk and Venetian attacks in defending the totally surrounded strategic outpost of Klis); Nikola Subic Zrinski (who captained a small garrison and was eventually killed in Szeged in 1566, but only after 20,000 Janissaries had been slain); Krsto Frankopan (with his breakthrough into Turkish lands as far as Jajce); Toma Erdödy (the hero of the battle of Sisak in 1593); Nikola Zrinski (with his daring raid far behind Turkish lines to attack Suleiman's bridge at Osijek in 1664); and Petar Zrinski (who defeated the Bosnian army at Otocac).

Consequences of the Turkish years

The most significant observation standing out from Croatia's stand against the Turkish threat is that the country survived at all. Its basic defence line held off a force many times more powerful than its own, becoming the bulwark that stood in the gap against the otherwise invincible Turks. While larger and more powerful armies in the Ottoman's path crumbled before it, the remnant of the Croatian state stood firm and resolute.

The country, of course, was reduced to a mere fraction of its territory. Even more significant was what happened to its people: besides those killed in

This graphic from 1600 portrays a Croatian hussar on horseback wearing high boots of soft leather with spurs. His is armed with a lance plus a small axe and sabre in his belt. The fur thrown over his back is either from a bear or several wolf pelts sewn together.

combat, an estimated 60,000 Croatians were taken captive in the 16th century alone, and thousands of refugees fled from their lands ahead of the Turks, moving both within Croatia to safer areas, but also to Austria, Italy, Hungary and further abroad. Croatia's demography was to be altered forever; people were uprooted and resettled while others moved into those territories, with thousands of Serbians and others who arrived fleeing the Turks finding

sanctuary behind Croatia's lines.

The great tragedy of the Turkish era for the Croatian people stemmed from the fact that its territory became for centuries the constantly shifting and bloody border between the world of western Christendom and eastern Islam. The plundering, raids and conquests had left chaos in their wake, breaking up the established economic and social framework and destroyed all political order

While its European neighbours could devote their attention during these Renaissance years to developing their cultural and state institutions, the Croatian people were forced for centuries to sleep with a knife under their pillow. But despite the disparity of their forces, they were never totally broken, and despite their deep disappointments over Christian Europe's apathy regarding their plight. they never bowed to Turkish rule. MI



The armoured (or heavy) Croatian hussar, 1580-1590.

In 1578, Emperor Rudolph II (1576-1608), the German emperor and Croatian king, turned the defence of the Military Frontier over to the administration of Karl II. From that year on, the Imperial treasury maintained 1,000 armoured hussars in Croatia. In the event of a direct threat of war, the Croatian governor, bishop and the local nobility was able to outfit around 500 other armoured and 3,000 unarmoured hussars. The basic units commanded by captains consisted of 50

According to the regulations of 1578, hussars who enlisted in mercenary service had to be of noble families, have good horses, armour, a chichak (German Zischägge) helmet, a shield, a five-metre-long lance, a sabre, a mace and a long, mail-piercing sword. They were allowed to carry the firearms of their choice.

From the second half of the 16th century, Austrian armourers from Graz produced the armour for the Croatian hussars on the border. Pictured is a hussar from 1580-90 and armour produced in the last quarter of the 16th century.

Hussar protective armour consisted of the chichak helmet, the cuirass and chain mail. The helmet with its conically fluted skull, cheeks, the peak with the adjustable nose and neck guard, bears a close resemblance to the Turkish style chichak. The

cuirass is totally laminated in order to allow the horseman the greatest possible mobility. The chain mail was made up of riveted mail.

The hussars wore furs across their armour either from the great lynx, wildcat, wolf or, in the case of the most well-to-do, a leopard skin. Their tight trousers were usually red or blue. The low-cut, high heeled boots worn as a rule by nobles, were either a natural tan leather, or dyed yellow. The Turks dyed their boots red, so therefore the hussars avoided that colour for their boots.

Left upper: Chichak with the nose guard lowered, of a similar construction as the hussar's. Besides the decorative purpose, the

flutings also strengthened the helmet skull.

Left middle: An officer's blued cuirass richly trimmed with brass nails. Was the custom of the several rows of buttons on the later hussar uniform in fact a copy of this lamellar armour? Left lower: Officer's back plate armour.

Right upper: Most of the 337 suits of armour preserved in the Graz museum (Landeszeughaus) belong to this type.

Right middle: This armour was also designed for hussars. It can be opened in the front, thereby imitating the style of a vest. In a 1625 inventory, this is refereed to as 'hussar armour parting at the breast'.

Right lower: An example of open armour.

The London Regiment: 20th-34th Battalions

20th (County of London) Battalion (Blackheath and Woolwich)

Titles: 1860, 1st Administrative Battalion of Kent Rifle Volunteers; 1880, 3rd Kent (West Kent) Rifle Volunteer Corps; 1883, 2nd Volunteer Battalion, Queen's Own (Royal West Kent Regiment).

1859, 4th Kent Rifle Volunteer Corps; 1883, 3rd Volunteer Battalion, Queen's Own (Royal West Kent Regiment).

26th Kent Arsenal) Rifle Volunteer Corps; 1864, 21st and 26th Kent (Royal Arsenal) Rifle Volunteer Corps; 1870, 26th Kent (Royal Arsenal) Rifle Volunteer Corps. 1908, 20th (County of London) Battalion, The London (Blackheath Regiment and Woolwich); 1922, 20th Battalion London Regiment (The Queen's Own); 1935, 34th (Queen's Own Royal West Kent) Anti-Aircraft Battalion, Royal Engineers.

The 1st Admin Battalion of Kent Rifle volunteers was formed with headquarters at Blackheath and comprised a number of Kent corps which been raised November 1859. Some would be disbanded before 1880, the remainder became part of the new 3rd Corps as follows: 3rd ('A' and 'B' Companies at Lee), 12th ('C' and 'D' Companies at Dartford), 13th ('E' Company at Greenwich), 18th ('F' Company at Bromley), 25th ('G' and 'H'

Part of Machine Gun Section, 21st London Regiment. (Ray Westlake Unit Archives.)

RAY WESTLAKE

HERE WE EXAMINE the titles, histories, battle honours, uniforms and badges of the London Regiment's 20th-34th Battalions, which made it the strongest regiment the British Army has ever seen even though some of them were extremely shortlived.

Companies at Blackheath), 27th ('I' Company at Deptford), 28th ('K' Company at Charlton) and 34th ('L' Company at Deptford).

Formed in 1860 at the Royal Arsenal, Woolwich, was the 26th Kent Corps which by August 1860 comprised 16 companies. In July 1864 the Corps was divided and numbered as 21st and 26th, but they were again united (as 26th) in 1870. Also formed at Woolwich was the 4th Corps which in 1880 was merged with the 26th.

The 3rd and 4th Corps having been designated as volunteer battalions of the Queen's Own (Royal West Kent Regiment) in 1883, were, in 1908, amalgamated as the new 20th London Regiment.

From headquarters at Holly Hedge House, Blackheath, 1/20th London moved to the St Albans area before crossing to France in March 1915. The Battalion subsequently served as part of 141st Brigade, 47th Division. The 2/20th, with 180th Brigade, 60th Division, served in France, Salonika, Egypt and Palestine. It then left for France again in June 1918 and there joined 198th Brigade, 66th Division.

Battle honours: Bestubert 1915, Loos, Somme 1916 and '18, Flers-Courcelette, Morval, Le

Transloy, Messines 1917, Ypres 1917. Langemarck 1917 Cambrai 1917 and '18, St 1918. Bapaume Quentin, Ancre 1918, Albert Hindenburg Line, Havrincourt, Canal du Nord, Selle, Sambre, France and Flanders 1915-18, Doiran 1917, Macedonia 1916-17, Gaza, El Mughar, Nebi Samwil, Jerusalem, Jericho, Jordan, Palestine 1917-18.

Uniform and badges: The first uniform of the Royal Arsenal Volunteers was dark green with red facings. The shako had a flowing horse-hair plume hanging over the front. Feathers replaced the plume in 1862 and in 1880 rifle busbies the shakos. Scarlet with blue facings was introduced in 1893 along with helmets. Green with black facing was worn by the 3rd Kent and later 2nd Volunteer Battalion. The new 20th London wore scarlet with black facings. The White Horse of Kent and motto 'Invicta' (unconquered) featured in the badges of the Kent rifle corps and those of the 20th London Regiment.

21st (County of London (First Surrey Rifles)

Titles 1859, 1st Surrey Rifle Volunteer Corps; 1860, 1st Surrey (South London) Rifle Volunteer Corps; 1908, 21st (County of London) Battalion, The London Regiment (First Surrey Rifles); 1922, 21st London Regiment (First Surrey Rifles); 1935, 35th (First Surrey Rifles) Anti-Aircraft Battalion, Royal Engineers.

Shortly after the 1st Surrey Rifle Volunteer Corps was formed in Camberwell, another (numbered as 3rd) was raised in the same area. By the beginning of 1860, and indicated for the first time in the Monthly Army List for February, the 1st and 3rd had been merged, the latter as No 2 Company. By 1861 the strength stood at eight companies and in 1881 1st Surrey became a volunteer battalion of the East Surrey Regiment. The Volunteer Annual of 1903 notes that the Corps was recruited from the middle classes, and that introduction by a member was necessary. There was an annual subscription of 10s 6d and the headquarters at 4 Flodden Road, Camberwell, included a large drill hall, gymnasium, School of Arms and a residence for a Sergeant-Major (in 1903, R.H. Rossiter). A lawn tennis club with several courts was included in a 3½-acre sports area adjoining the HQ.

War stations were taken up around St Albans just after war was declared in 1914. By 2 March 1915 orders had been received for the 2nd London Division (later numbered 47th) to proceed to France. The Battalion, with 142nd Brigade, later took part in the May fighting at Aubers Ridge and Festubert and before the end of the year at Loos. There would be duty at Vimy Ridge before the capture of High Wood on the Somme in September 1916, Messines, Ypres and Cambrai following in 1917.

The second line, 2/21st Battalion, moved with 181st Brigade, 60th Division, from France to Salonika in November 1916. After the actions at Doiran in April and May 1917 service was seen in Egypt and Palestine. The Battalion was disbanded in Palestine on 3 June 1918.

Battle honours: Festubert 1915, Loos, Somme 1916 and '18, Courcelette, Le Transloy, Messines 1917, Ypres 1917, Cambrai 1917, St Quentin, Bapaume 1918, Ancre 1918, Amiens, Albert 1918, Pursuit to Mons, France and Flanders 1915-18, Doiran Macedonia 1916-17, Gaza, El Mughar, Nebi Samwil, Jerusalem, Jericho, Jordan, Tell Asur, Palestine 1917-18.

Uniform and badges: Uniforms were green with scarlet facings. In 1969 an interesting photograph appeared in the Bulletin of the Military Historical Society showing three officers of the First Surrey Rifles in full dress. Dated 1909, the forage caps have black feathers at the front out of which spring red brushes, the whole being some eight or nine inches in height; an unusual addition to this type of headdress. The uniform is described as being dark green with red collar and cuffs. Black stripe on trousers and black lace. Black patent leather pouch-belts are worn, these having silver whistle and chain sets with crowned Maltese Cross plates. Another picture appearing in the Bulletin



(August 1976) shows another rank wearing a shorter plume in the cap. Cap badge: a crowned Maltese cross.

22nd (County of London) Battalion (The Oueen's)

Titles: 1868, 4th Administrative Battalion of Surrey Rifle Volunteers; 1880, 6th Surrey Rifle Volunteer Corps; 1883, 3rd Volunteer Battalion, Queen's (Royal West Surrey Regiment); 1908, 22nd (County of London) Battalion, The London Regiment (The Queen's); 1922, 22nd London Regiment (The Queen's); 1937, 6th (Bermondsey) Battalion, Queen's Royal Regiment (West Surrey).

In February 1860 the 10th Surrey Rifle Volunteer Corps of one company was formed at Bermondsey. In the following year the 23rd, also one company, was raised at Rotherhithe. These, in 1868, were grouped together as the 4th Administrative Battalion of Surrey Rifle Volunteers which in 1880 was consolidated as 6th Corps. By this time the combined strength of the battalion stood at eight companies - 'A' and 'B' at Bermondsey, the remainder at Rotherhithe. In 1884 headquarters were moved from Rotherhithe to Bermondsey (2 Jamaica Road).

The first-line battalion moved to France in March 1915 and with 142nd Brigade, 47th Division, fought on the Western Front until the end of the war. The 2/22nd (181st Brigade, 60th Division), after service in France moved to Salonika in November 1916 and later took part in operations throughout Egypt and Palestine.

Battle honours: Aubers, Festubert 1915, Loos, Somme 1916 and '18, Flers-Courcelette, Le Transloy, Messines 1917, Ypres 1917, Cambrai 1917, St Quentin, Bapaume 1918, Ancre 1918, Albert 1918, Pursuit to Mons, France and Flanders 1915-18, Doiran 1917, Macedonia 1916-17, Gaza, El Mughar, Nebi Samwil, Jerusalem, Jericho, Jordan, Tell Asur, Megiddo, Sharon, Palestine 1917-18.

Uniform and badges: Uniforms changed from dark green with scarlet facings to scarlet with blue in 1880. Badges featured the Paschal Lamb of the Queen's Royal West Surrey Regiment.

23rd (County of London) Battalion

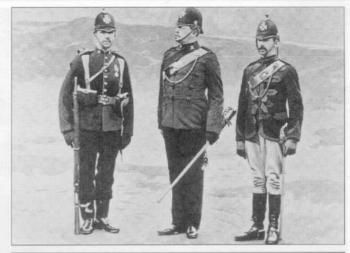
Titles: 1859, 7th Surrey Rifle Volunteer Corps; 1887, 4th Volunteer Battalion, East Surrey Regiment; 1908, 23rd (County of London) Battalion, The Private, officer full dress, officer mounted order, 4th Volunteer Battalion Queen's (Royal West Surrey Regiment). (Ray Westlake Unit Archives.)

London Regiment; 1922, 23rd London Regiment; 1927, 23rd London Regiment (The East Surrey Regiment); 1937, 7th (23rd London) Battalion, East Surrey Regiment.

The 7th Surrey Corps was formed at Southwark and consisted of six companies by 1860. Raised at Lavender Hill, Clapham, in 1875 was the 26th Corps of four companies which in 1880 was merged with the 7th, the new ten-company batalion having its headquarters in Southwark. New premises at 27 St John's Hill, Clapham Junction, were opened in 1902.

The Battalion historian records that the 23rd left for annual training on 2 August 1914. Between Willesden Junction and Action the train was stopped and directed back Clapham Junction. Mobilised, the Battalion moved to the St Albans area, landed at Havre on 16 March 1915 and subsequently served on the Western Front with 142nd Brigade, 47th Division. 2/23rd, with 181st Brigade, 60th Division, served in France, Salonika, Egypt and Palestine. It returned to France in July 1918 and there served with 21st Brigade, 30th Division.

Battle honours: Festubert 1915, Loos, Somme 1916 and '18, Flers-Courcelette, Le Transloy, Messines 1917, Cambrai 1917, St Quentin, Ancre 1918, Albert 1918, Bapaume 1918, Ypres 1918, Courtrai, France and Flanders 1915-18, Doiran 1917, Macedonia 1916-17, Gaza, El





Mughar, Nebi Samwil, Jerusalem, Jericho, Jordan, Tell Asur, Palestine 1917-18.

Uniform and badges: Green with scarlet facings changed to scarlet with white in 1889. Badges were based on those of the East Surrey Regiment.

24th (County of London Battalion (The Queen's)

Titles: 1860, 19th Surrey Rifle Volunteer Corps; 1880, 8th Surrey Volunteer Corps; 1883, 4th Volunteer Battalion, Queen's (Royal West Surrey Regiment); 1908, 24th (County 4th Volunteer Battalion, East Surrey Regiment. Note canvas shooting caps. (Ray Westlake Unit Archives.)

of London) Battalion, The London Regiment (The Queen's); 1922, 24th London Regiment (The Queen's); 1937, 7th (Southwark) Battalion, Queen's Royal Regiment (West Surrey).

Machine-Gun Section, 24th London Regiment. (Ray Westlake Unit Archives.)





Sergeants, 26th Middlesex (Cyclist) Rifle Volunteer Corps. Note riding spats with dark blue hose tops. (Ray Westlake Unit Archives.)

The 19th Surrey Corps was formed at Lambeth and soon comprised eight companies. Headquarters are given as 71 New Street, Kennington Park, from 1869. Two new companies were raised in 1890 followed by a company of cyclists in 1901. With 6th London Brigade, 2nd London Division (later designated 142nd Brigade, 47th Division), the Battalion moved to its war stations around St Albans in August 1914. Crossing to France in May 1915, 1/24th served in France and Flanders. The second-line battalion, 2/24th (181st Brigade, 60th Division), landed at Havre on 26 June 1916, then moved to Salonika in the following November and Egypt in January 1917. After service in Palestine the Battalion left the 60th Division and returned to France in July 1918. Service for the remainder of the war was on the Western Front with 198th Brigade, 66th Division and later 173rd Brigade, 58th Division.

Battle honours: Aubers, Festubert 1915, Loos, Somme and '18, Flers-1916 Le Transloy, Courcelette, Messines 1917, Ypres 1917, Cambrai 1917, St Quentin, Bapaume 1918, Ancre 1918, Albert 1918, Hindenburg Line, Epehy, Pursuit to Mons, France and Flanders 1915-18, Doiran 1917, Macedonia 1916-17, Gaza, El Mughar, Nebi Samwil, Jerusalem, Jericho, Jordan, Tell Asur, Palestine 1917-18.

Uniform and badges: Green with scarlet facings were replaced by scarlet and blue in 1908. The Paschal Lamb of the Queen's Royal West Surrey Regiment featured in the badges after 1883.

25th (County of London) (Cyclist) Battalion

Titles: 1888, 26th Middlesex (Cyclists) Rifle Volunteer Corps; 1908, 25th (County of London) (Cyclist) Battalion, The London Regiment; 1923, 47th (2nd London) Divisional Signals.

Formation of the 26th Middlesex Corps in 1888 brought into existence the first volunteer corps completely dedicated to a cyclist role. It was organised into three companies and affliliated to the King's Royal Rifle Corps. Headquarters in 1914 were at Fulham House, Putney Bridge, and from there war stations were taken up on the Kent and Sussex coast. After reorganisation as an infantry battalion at Chisledon, 1/25th sailed from Devonport to India in February 1916. The Battalion later served under Brigadier-General Dyer in the Waziristan campaign (see 'London Territorials on the Frontier, 1919' by Michael Barthorp, MI/38). The 2/25th served on coastal defence duty in Sussex and Norfolk.

Battle honour: N.W. Frontier India 1917.

Uniform and badges: Full dress for the volunteers is described as 'Austrian' grey with red facings and silver lace for officers. Dark blue patrol jackets were worn in undress by officers and NCOs. When riding, knee breeches were worn with spats and dark blue hose tops. Caps were dark blue sides, red and grey inside. Badges featured a cycle wheel.

28th (County of London) Battalion (Artists Rifles)

Titles: 1860, 38th Middlesex Rifle Volunteer Corps; 1877, 38th Middlesex (Artists) Rifle Volunteer Corps; 1880, 20th

25th London Regiment (Cyclist), Lewes, Sussex, 1909. Note officer's blue jackets and white cap covers. (Ray Westlake Unt Archives.) Middlesex (Artists) Rifle Volunteer Corps; 1908, 28th (County of London) Battalion, The London Regiment (Artists Rifles); 1922, 28th London Regiment (Artists Rifles); 1937, The Artists Rifles, The Rifle Brigade (Prince Consort's Own).

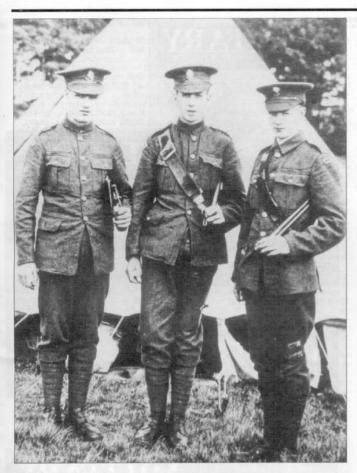
The Corps was recruited from painters, sculptors, musicians, architects, actors and other members of artistic occupations and from one company in 1860 grew to 12 by 1900.

Affilitation was to the Rifle Brigade in 1881. Headquarters moved from the Arts Club, Hanover Square, to the West London School of Art in 1880, Fitzroy Square in 1882 and to Duke's Road, Euston, in 1889. The Volunteer Annual of 1903 notes that there was an annual subscription of 25 shillings.

The Battalion left for France on 27 October 1914 and was soon attached to the 7th Division at Bailleul. In his history of the 28th, Colonel H.A.R. May records how, in November 1914, 50 men were selected for immediate promotion to officers due to the high losses within the various battalions of the 7th Division. The men chosen were quickly sent to their new units wearing private's uniform with a star on each shoulder strap. After functioning as an Officer Training Corps unit at Bailleul and St Omer, 1/28th joined 190th Brigade, 63rd (Royal Naval) Division.

The 2/28th was absorbed into the 1/28th in 1915 and at the same time 3/28th was renumbered as 2/28th. It then became No 15 Officer Cadet Battalion at Romford.





Drums, 28th London Regiment (Artists Rifles). Note blue on grey shoulder titles. (Ray Westlake Unit Archives.)

Battle honours: Ypres 1917, Passchendaele, Somme 1918, St Quentin, Bapaume 1918, Arras 1918, Ancre 1918, Albert 1918, Drocourt-Queant, Hindenburg Line, Canal de Nord, Cambrai 1918, Pursuit to Mons, France and Flanders 1914-18.

Uniform and badges: Uniforms were grey with black braid and piping. The heads of Mars and Minerva feature in the badge, the designer, Lord Leighton, symbolising the connection between war and the arts.

26th, 29th, 30th, 31st, 32nd, 33rd, 34th Battalions

As mentioned in MI/55, the battalion number 26 was originally allocated to the Honourable Artillery Company which, as the oldest regiment in the British Army, was later allowed to remain separate from the London Regiment. Formation of a new battalion with this number was approved in February 1916. It was to be raised from men from the Dominions and Colonies. In March, however, it was announced in Army Council Instruction 468 that as enough recruits had not come forward the battalion would not be

In 1915 a number of battal-

ions were formed comprising men of the Territorial Force who were physically unfit, or unable to serve overseas. These were called Provisional Battalions and numbered in their own sequence. On 1 January 1917, what battalions remained were added to infantry regiments as home service battalions and renumbered. Consequently 100th and 102nd Provisional Battalions became 29th (City of London) Battalion, London Regiment (disbanded July 1919); 101st, 103rd and 104th became 30th (City of London) (disbanded April 1919); 105th and 107th became 31st (County London) (disbanded September 1917); 106th and 108th became 32nd (County of London) (disbanded April 1918).

The 33rd (County of London)
Battalion was formed in June
1918 and absorbed 7th Rifle
Brigade. It moved to France on
2 July and served with 41st
Brigade, 14th Division.
Disbanded August 1919.

The 34th (County of London) Battalion was also formed in June 1918, absorbing 7th King's Royal Rifle Corps. Moved to France in August and served with 49th Brigade, 16th Division. Disbanded June 1919.

Except for the 30th Battalion, who wore the cap badge of the Royal Fusiliers, it is not known how the remainder were



badged. Both the 33rd and 34th upon absorbing 7th RB and 7th KRRC respectively became part of the Corps of those regiments.

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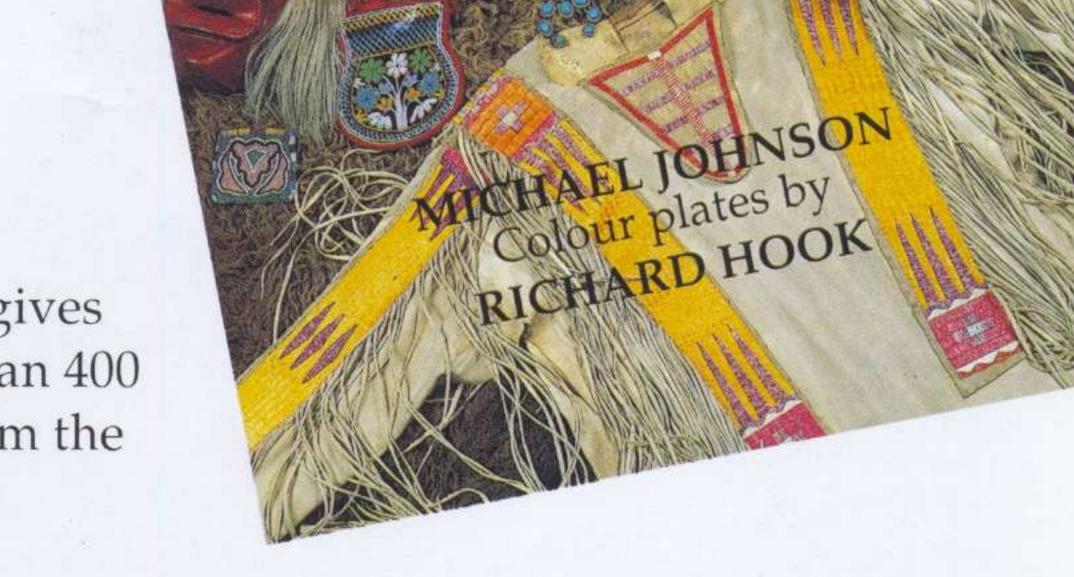
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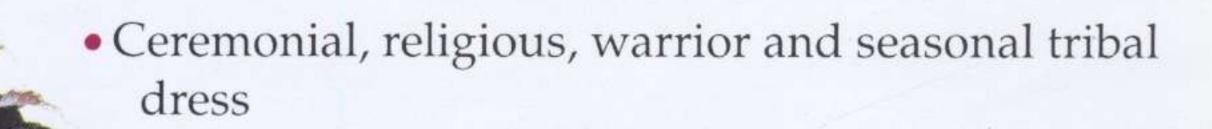
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